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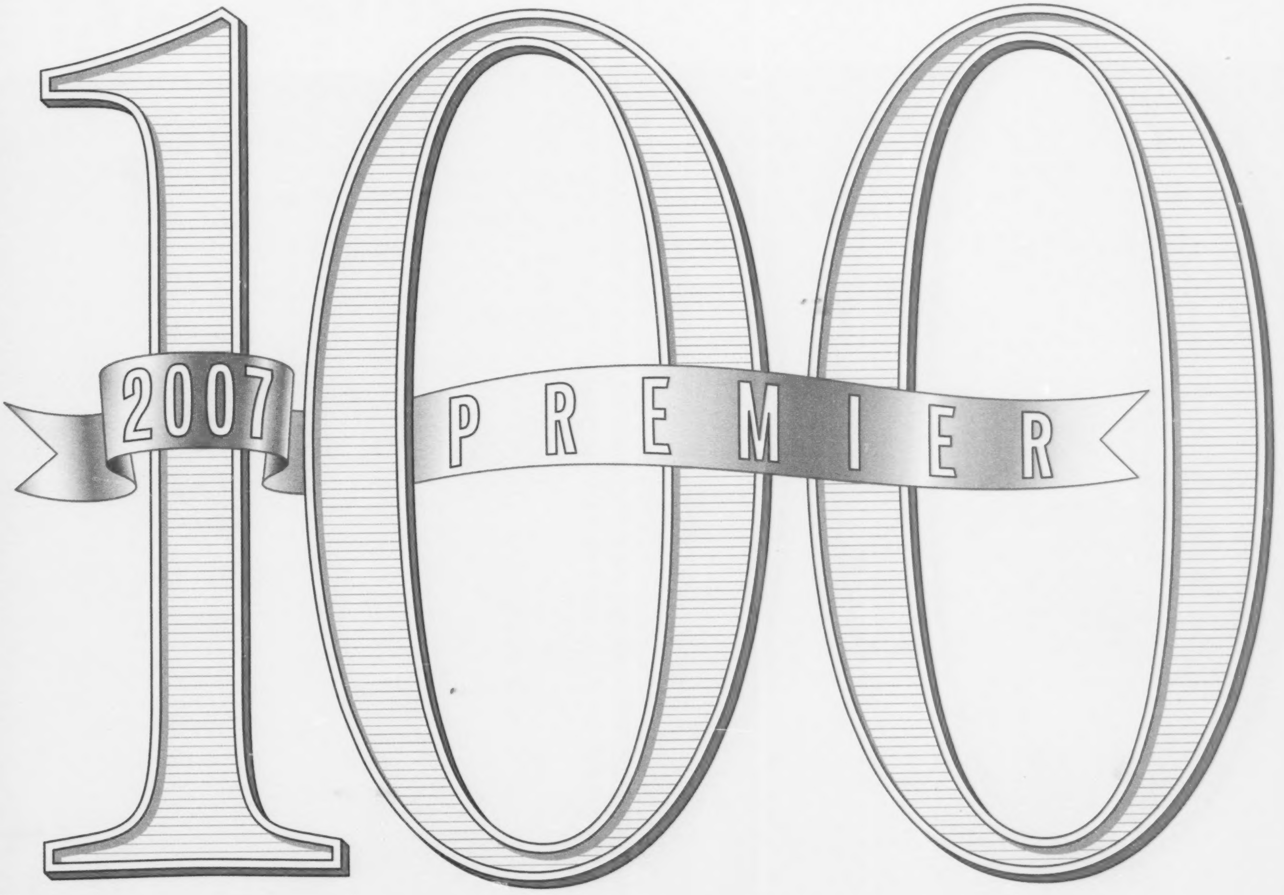

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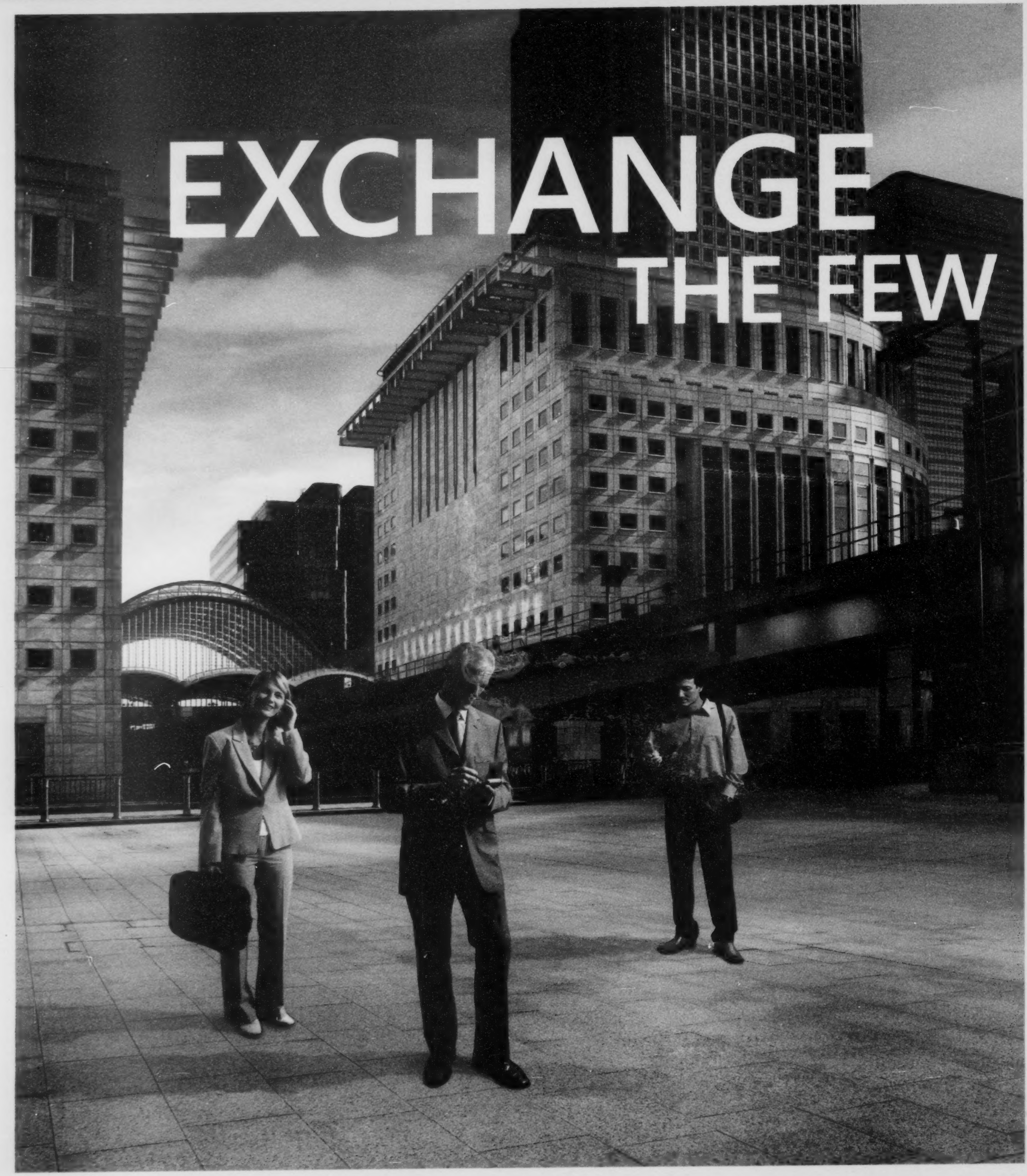
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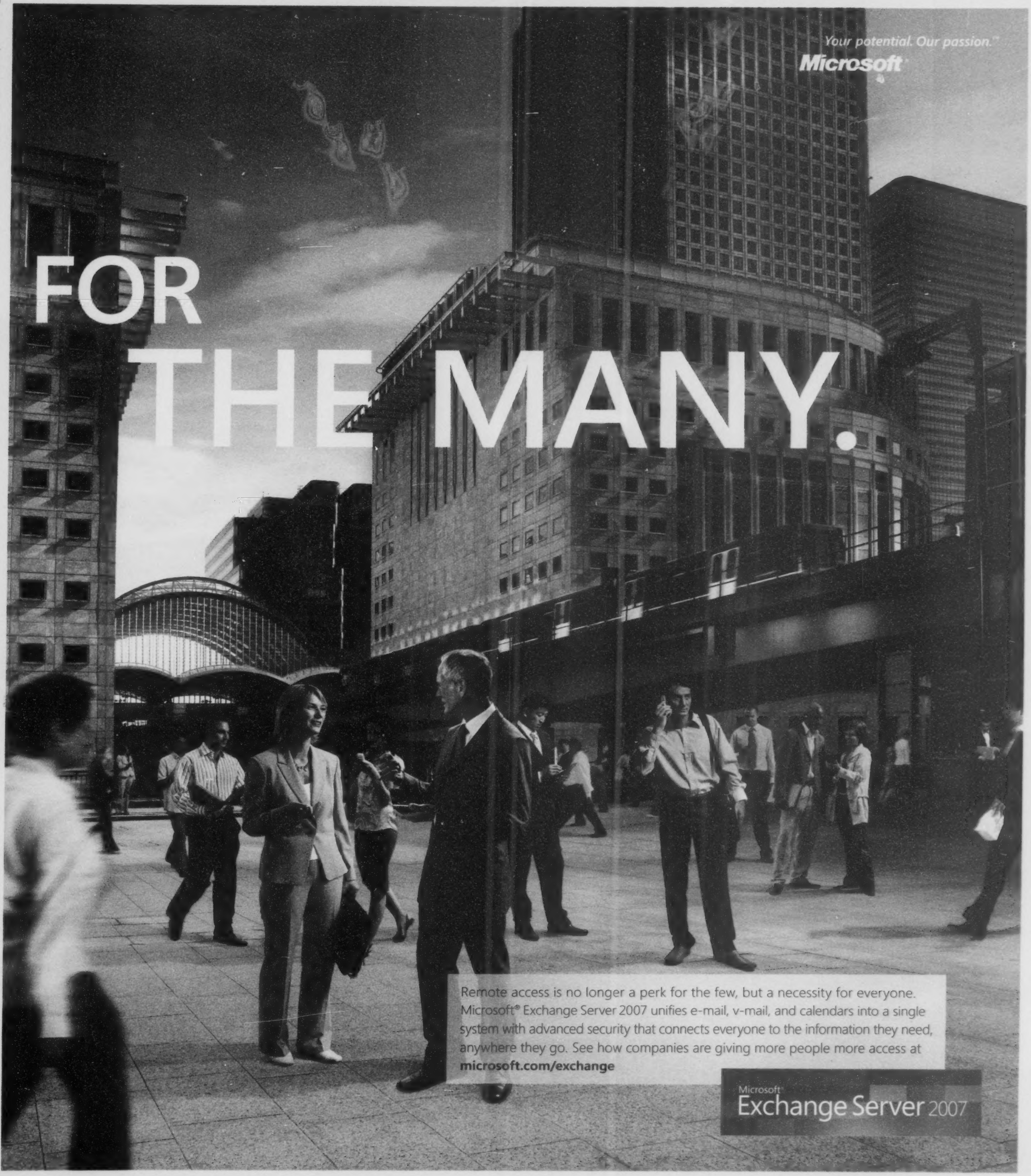
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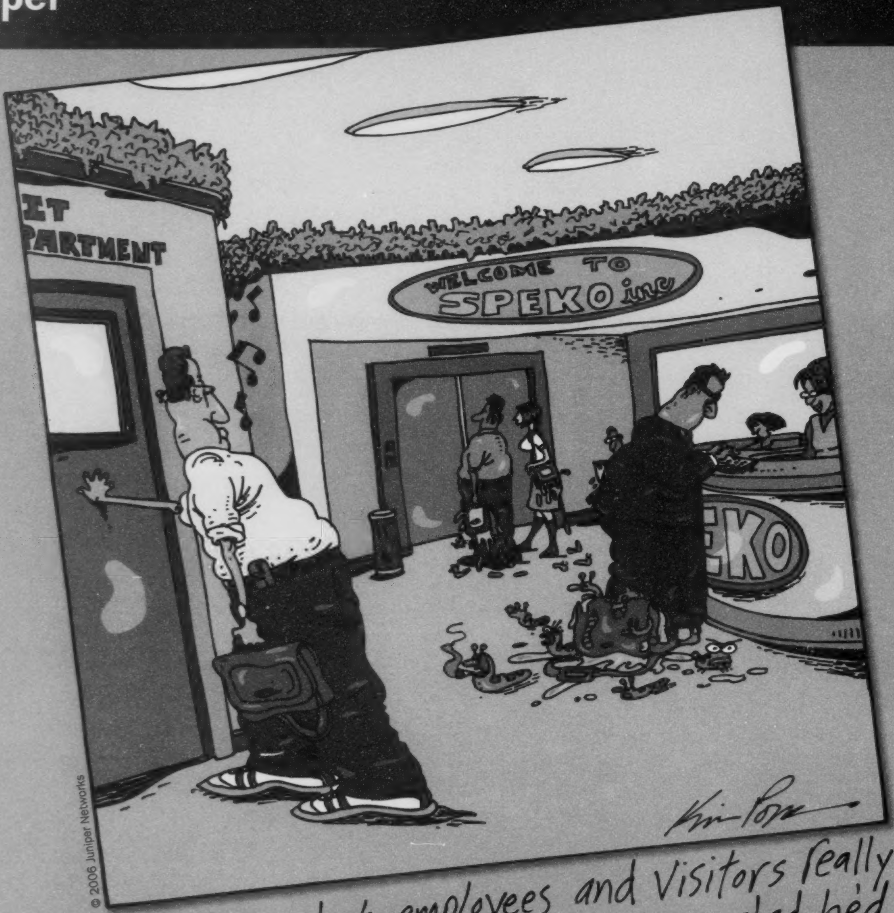

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PREMIER 100 IT LEADERS 2007

Our annual awards program honors the men and women driving strategy and innovation in top-tier IT departments.

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40 **SEVEN COMMON OBSTACLES.** Premier 100 IT Leaders talk about seven key hurdles they face daily.

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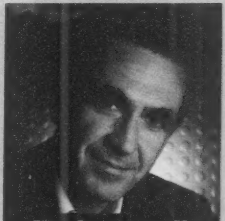

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The Making of An IT Career

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DICK DANIELS, Capital One Auto Finance Inc.

MARK HOPKINS, University of Pittsburgh Medical Center

J. CLARK KELSO, state of California

JANICE MALASZENKO, Xerox Information Management

DONNA SEYMOUR, U.S. Maritime Administration

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62 **SYNCING UP WITH YOUR CEO.** IT leaders say success in meeting their CEOs' goals requires deft handling of human relations.

64 **BEING A BUSINESS TEAM PLAYER.** For many Premier 100 IT Leaders, the key to building successful business relationships is reaching out to other executives to better understand their needs.

66 **NOT YOUR FATHER'S IT.** No longer do IT leaders simply support business strategies. Instead, many help design and evolve new business models.

68 **FRANKLY SPEAKING.** This year's *Computerworld* Premier 100 are neck-deep in the real challenges of IT leadership in business, says columnist Frank Hayes. They get it, and we can, too.

Online

The following stories can be found at www.computerworld.com/07/p100.

HONOR ROLL. View the Premier 100 IT Leader alumni from 2000 through 2007.

EDITORS' PICKS. Need tips for becoming an IT Leader? Read *Computerworld*'s top stories from 2006 on leadership and management skills.

CONFERENCE RECAP. View video webcasts from the 2006 Premier 100 IT Leaders conference, featuring Michael Theis, chief of cyber counterintelligence for the National Reconnaissance Office, who talks about just-in-time security for the agile IT architecture. Also, view a panel discussion about the technology lessons learned during the 2005 Gulf Coast hurricanes.

KNOW AN IT LEADER? Is there someone you'd like to recommend for next year's list? Nominate that person today at www.computerworld.com/p100nominations08.

AT DEADLINE

IBM Alleges PSI Infringed Patents

IBM filed a lawsuit in a New York federal court charging Platform Solutions Inc. with patent infringement and breach of contract. IBM contends that PSI needs an IBM license to sell its technology, which allows IBM's z/OS and OS/390 software to run on non-IBM mainframes. IBM refuses to license its operating systems for that use. PSI contends that it can sell the technology without a license.

HP, Calif. Settle In Pretexting Case

Hewlett-Packard Co. has agreed to pay California $14.5 million in a step toward resolving the controversy surrounding its pretexting scandal. The settlement with California Attorney General Bill Lockyer was filed in Santa Clara County Superior Court. HP also agreed to a number of internal changes to ensure that it meets legal and ethical standards. Some HP executives still face criminal charges.

Police Raid IBM's Moscow Offices

Russian police raided IBM's Moscow offices as part of an investigation into alleged procurement fraud. An IBM spokesman wouldn't say if documents or computer equipment were seized. Police also raided two Russian IT companies, Lanit Group and R-Style Group. The raids were part of an investigation into computer purchases by the country's pension fund for higher-than-market prices.

Windows Media Player Flaw Found

Security experts have discovered a flaw in Microsoft Corp.'s Windows Media Player Versions 9 and 10 that could allow a hacker to run unauthorized software on a victim's PC or cause a denial-of-service attack. French security organization FrSIRT last week rated the problem critical. Microsoft said it is unaware of any attempts to exploit the flaw.

Panel Shifts Direction On E-voting Audit Trail

Federal board OKs plan requiring that new machines create vote records

BY GRANT GROSS

A GOVERNMENT board charged with improving the security of electronic voting last week took a first step toward requiring that new e-voting machines include independent audit mechanisms.

The move came just a day after the same board had voted to reject a similar but stronger measure.

The latest proposal, unanimously approved by the U.S. Election Assistance Commission's Technical Guidelines Development Committee (TGDC), would require that new direct recording electronic (DRE) voting machines provide independently verifiable voting records, such as voter-verified paper-trail printouts.

The plan, offered by TGDC member Ronald Rivest, a computer science professor at MIT, calls on the group's Security and Transparency Subcommittee to write requirements for the next generation of e-voting machines.

According to the approved proposal, the rules must ensure that new machines use an audit mechanism that is independent of the software running the machines. "I think [the proposal] is very important for the safety of voting machines in this country," Rivest said.

A final proposal will be submitted to the Elections Assistance Commission next July. The commission will solicit public comment before taking a vote on the plan.

The committee had rejected a proposal to require that audit capabilities also be added to machines already installed in voting districts nationwide.

> **I'm not sure that we've really proven that the processes that state election officials have used for a few decades now of testing and verifying that the systems work are failing.**
>
> **PAUL MILLER**, VOTING SYSTEMS MANAGER, SECRETARY OF STATE'S OFFICE, STATE OF WASHINGTON

"I'm not sure that we've really proven that the processes that state election officials have used for a few decades now of testing and verifying that the systems work are failing," said Paul Miller, voting systems manager in the state of Washington's secretary of state's office.

The Association for Computing Machinery's Public Policy Committee, which has long called for e-voting machines to produce physical records, said in a statement last week that it supports the vote.

"We have long held the position that there needs to be a means of verification that voters recognize as the vote they cast," the statement said. "The committee . . . rightly acknowledges that further research in this field is needed."

Meanwhile, H. Stephen Berger, chairman of the voting systems standards committee at the Institute of Electrical and Electronics Engineers, contended that vendors should be able to develop software for e-voting machines that can accurately count votes without requiring a paper trail.

However, Daniel Schutzer, executive director of the Financial Services Technology Consortium, noted that Internet browsers have less code than the typical DRE machine and still have "tons of problems" with security. "If money were no object, if time were no object," e-voting machine vendors could create software that was free of bugs and could be tested and verified, Schutzer added. "Considering what we're working with . . . that's still a pipe dream," he said.

Rivest noted that the plan approved by the committee also addresses concerns about making installed machines accessible to disabled people.

Makers of e-voting machines will support the plan if it's finally approved by the Election Assistance Commission, said Michael Kerr, director of the Information Technology Association of America's Election Technology Council, a trade group representing e-voting vendors.

E-voting machine vendors "will build voting machines that comply" with the wishes of their customers, Kerr said. ▸

Gross is a reporter for the IDG News Service.

Maryland Official Reverses Stance on E-voting Bill

MARYLAND Senate President Thomas V. Mike Miller said last week that he plans to support a bill requiring that e-voting machines provide a paper trail, just months after opposing a similar measure.

Miller said he had opposed legislation filed earlier this year to require a paper trail of electronic votes because the bill was filed too close to last month's general election.

The senator said he had feared that local officials wouldn't have enough time to meet the requirements of the bill. With the next major election two years away, those officials should have plenty of time to ensure that e-voting machines provide a paper trail if such a law is enacted next year, he said.

"This is a concern about the future," Miller said. "We haven't had problems [with e-voting] in Maryland. Our optical machines have worked fine." He contended that problems in recent elections can be traced to human error.

For example, apparent human error was cited in September when some 12,000 Maryland voters were forced to use makeshift provisional ballots when they couldn't access e-voting machines during primary elections. Officials said that cards required for access to the machines weren't shipped to 238 precincts in Montgomery County.

A law requiring a paper record of every vote cast would ensure the integrity of the election process, Miller said last week. "We want to make sure that every vote is counted and secure and that there is a paper trail," he added.

Rich Abbruzzese, a spokesman for Martin O'Malley, who will be sworn in as governor of Maryland on Jan. 17, said O'Malley has been reviewing e-voting issues with officials of the outgoing administration of Gov. Robert L. Ehrlich Jr.

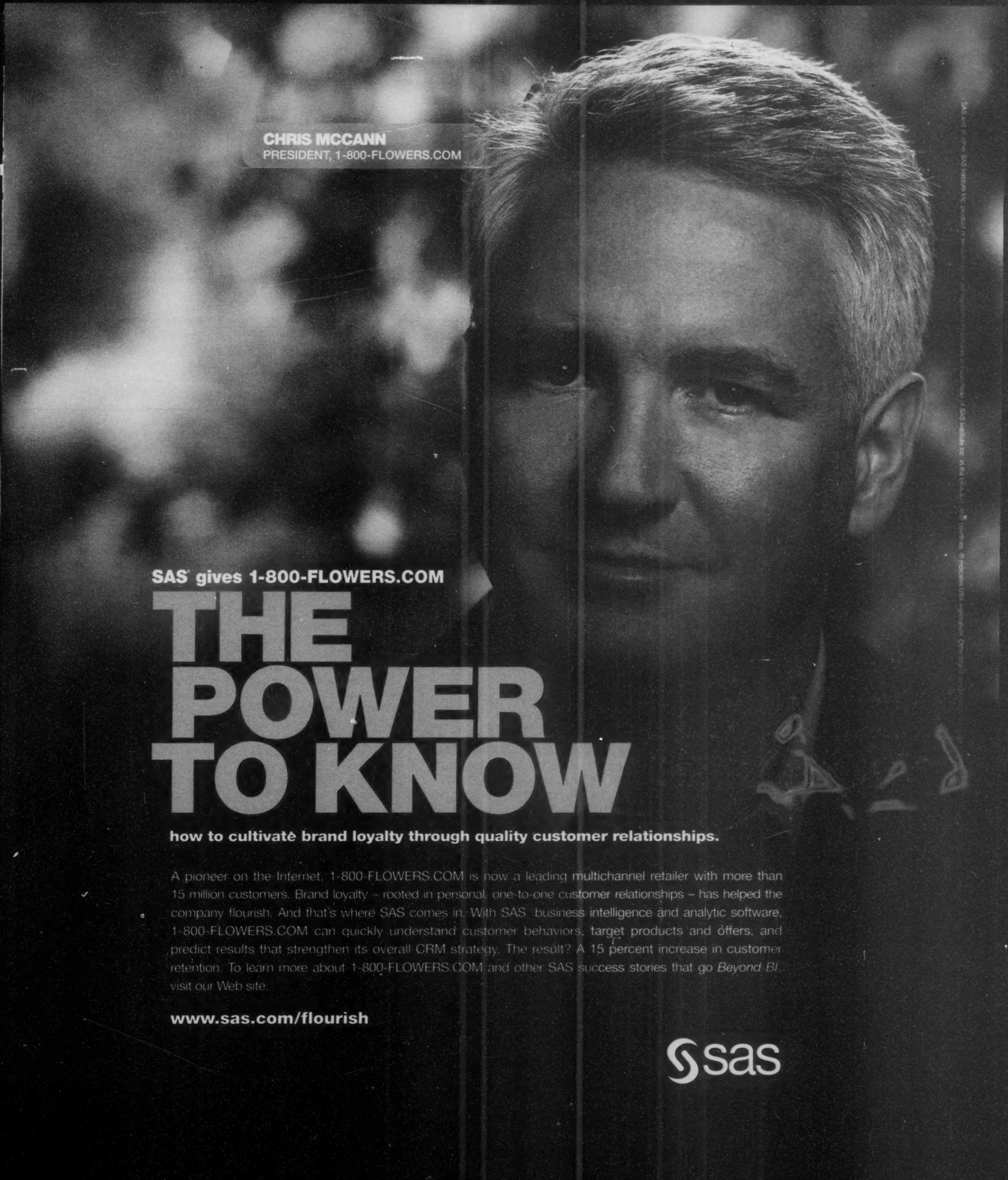
Abbruzzese said a workgroup has been charged with looking at election issues during the transition. "Their job is to come up with some recommendations for the governor-elect and the lieutenant governor-elect," Abbruzzese said.

Through a spokesman, Linda Lamone, administrator of the Maryland State Board of Elections, declined to comment on plans to revive the effort to require an e-voting paper trail.

Lillie Coney, coordinator for the National Committee for Voting Integrity, a project of the Electronic Privacy Information Center, called voter-verifiable paper trails "the most secure way to audit an election and the most secure way to recover from [voting machine] failures."

"Maryland has been trying since 2002 to get it right with their voting systems," Coney said. "This is good news because that's where we are with the technology."

– TODD R. WEISS

**CHRIS MCCANN**
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Firms Invest Millions in E-health Records Plan

Executives expect joint effort to cut health care costs

BY HEATHER HAVENSTEIN

FIVE MAJOR corporations last week announced plans to fund the development of a Web-based system that would allow their employees and retirees to access and maintain personal medical records.

Officials at the companies — Applied Materials Inc., British Petroleum America Inc., Intel Corp., Pitney Bowes Inc. and Wal-Mart Stores Inc. — said they have jointly invested several million dollars in the project as part of an effort to cut hefty health care costs.

The electronic health records system, called Dossia, will be developed by the Omnimedix Institute, a two-year-old nonprofit research and development organization that focuses on IT in health care. The Dossia system will keep an electronic store of the health information of some 2.5 million employees and retirees of the sponsoring companies and their dependents.

At a briefing last week, officials of the sponsoring firms said they expect that Dossia — which will be available to their employees by mid-2007 — will reduce medical errors and duplicate testing, and help alleviate other causes of rising health care costs.

Craig Barrett, chairman and CEO of Intel, said that as health care costs cut into the corporate bottom line, it has become critical for companies to take an active role in the process. "Think of [Dossia] as American industry getting involved in health care," he said. "If we're paying half of the [health care] bill in the U.S., we want to get a more effective return on that investment."

Each of the founding members is contributing a "seven-figure" sum to Omnimedix to fund the development of Dossia, Barrett said. The executives declined to disclose the specific amount of the investment.

Dossia Details

- Allows employees of founding companies to keep their own electronic stores of health information.
- Patient data can be shared with a doctor or others only at the user's discretion.
- Each employee decides what information is included in Dossia.
- Additional employers and government agencies can join by paying a per-user fee.
- New paying members will be announced in February.

J.D. Kleinke, chairman and CEO of Portland, Ore.-based Omnimedix, described Dossia as a "hypersecure medical Internet." Users can enter personal information into the system and can request that it gather specific personal health data for them, Kleinke said. Neither employers nor insurance companies can access the information.

Omnimedix is already working with insurance companies, laboratories and pharmacies in an effort to get them to provide data for the system, said Colin Evans, director of policy and standards at Intel's Digital Health Group. Intel, which spends $500 million annually on health care, plans to "strongly encourage, if not mandate," that its health care vendors supply Omnimedix with the data it needs, he said.

Demand to Fuel Adoption

Linda Dillman, executive vice president of risk management, benefits and sustainability at Wal-Mart in Bentonville, Ark., said the retailer expects that growing consumer demand for health information will help drive the adoption of electronic health records.

Michael Critelli, chairman and CEO of Stamford, Conn.-based Pitney Bowes, said Dossia will help expand the company's efforts — including fitness and nutrition programs for employees — to proactively curb health care costs.

Patricia Miller, senior vice president of human resources at Warrenville, Ill.-based BP America, said her company can't yet quantify potential savings from using the Dossia system, but she noted that "we are confident that just the efficiencies that this sort of system brings will by definition reduce costs."

Scott Tiazkun, an analyst at market research firm IDC, said the only way a program that allows patients to control health information can get off the ground is through a group effort. "Having Intel and Wal-Mart as part of a consortium guarantees initial success," he said.

However, he questioned whether such a program can cut health care costs, asking, "Is there a cost benefit to this or just an additional cost of creating this and maintaining it?" ▶

Delta Set to Launch Three-Year SOA Project

Plans to replace Tuxedo IT backbone with standards-based technology

BY HEATHER HAVENSTEIN

Delta Air Lines Inc. this week is launching a three-year project to replace its core IT backbone with a service-oriented architecture (SOA).

Delta Technology Inc., the IT arm of the Atlanta-based airline, this week will begin the process of updating the Delta Nervous System, an IT backbone used to route messages among multiple systems. The DNS manages everything from tracking passenger check-ins and boarding to the SkyMiles frequent-flier program, the company said.

The goal of the project — dubbed DNS 2.0 — is to replace proprietary Tuxedo middleware from BEA Systems Inc., which now runs DNS, with standards-based SOA technology, said Rawls Whittlesey, Delta Technology's chief architect and director of enterprise architecture and middleware frameworks.

The SOA will allow the company to use industry standards to develop new systems and to move data between systems, she said.

"We wanted to implement an industry-standards type of architecture and move to the next generation of products and technology within that architecture," Whittlesey said. "Ultimately, our goal is to speed time to market and to be more flexible."

She declined to disclose the cost of the project.

Freedom From Tuxedo

Delta is not unhappy with Tuxedo, Whittlesey noted, but is instead looking for software that supports industry standards so "we're not locked into the proprietary stuff around Tuxedo."

Delta plans to use the ActiveMatrix set of SOA tools from Tibco Software Inc. to create the foundation of DNS 2.0, Whittlesey said.

Delta Air Lines is set to begin work on replacing a proprietary IT architecture from BEA Systems with a standards-based SOA.

The ActiveMatrix tool set, which Tibco unveiled just last week, is designed to help developers write core business logic for an application and deploy that logic as a "virtualized service" that can automatically manage all configuration details, Tibco said. ActiveMatrix also includes a services registry and an SOA policy management tool, the company said.

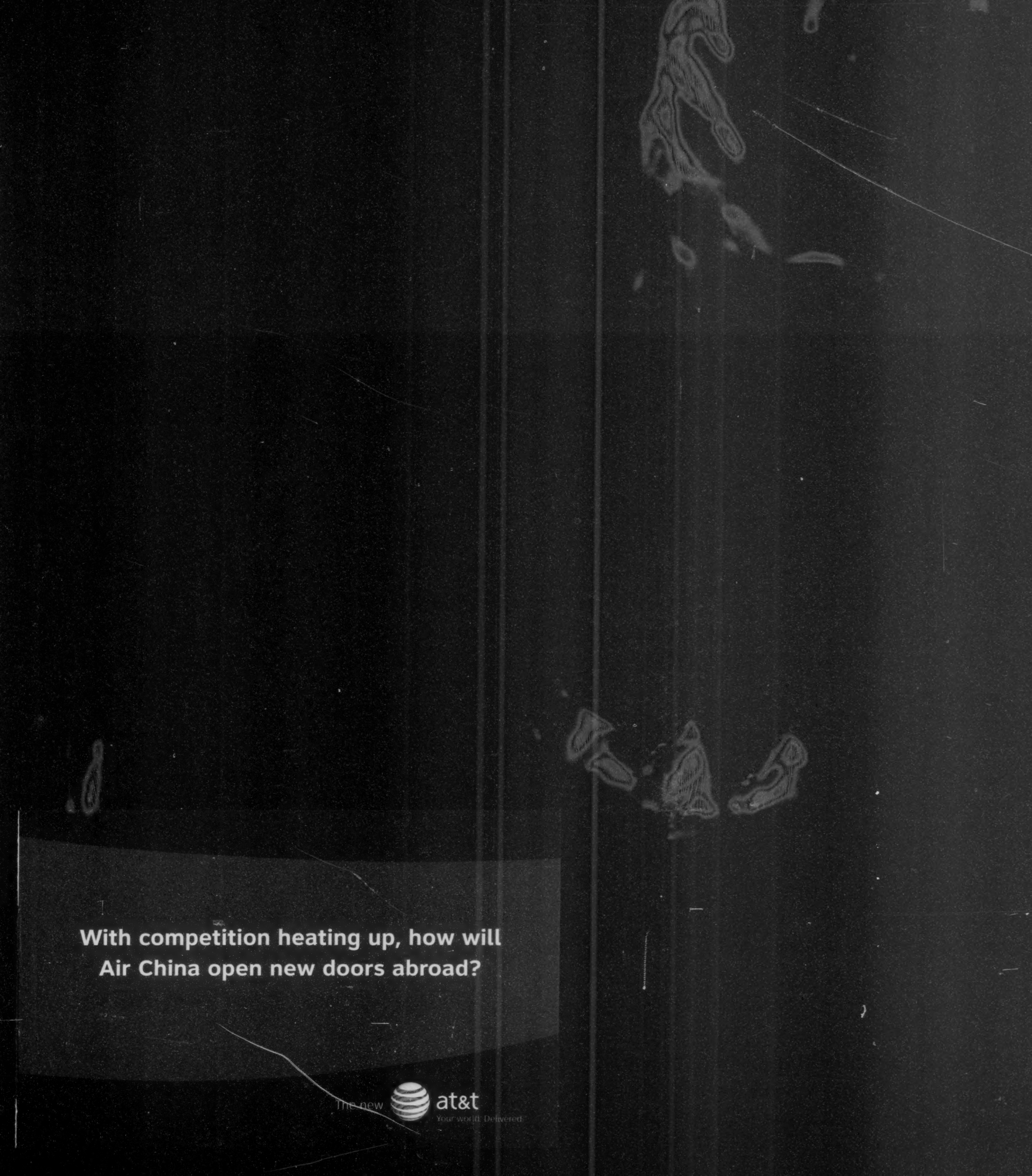
Over the next year, Delta will port more than 100 Java, C++ and .Net services written with Tuxedo to ActiveMatrix, Whittlesey said.

In addition, the service virtualization will help reduce application configuration requirements, she noted. "You want to try to insulate the applications from having to know what server they are on and what environment they are in," Whittlesey said. By using virtualization, "the application teams don't have to know where a service lives," she added.

Whittlesey acknowledged that the move to an SOA will provide challenges for both business users and developers.

Business users, for example, are worried about how they will devise policies to govern business processes built with the services, she explained. "Just getting the developers to go and look to see what services are [in the registry] to really get the reuse . . . is really going to require a change in mind-set," she said.

Randy Heffner, an analyst at Forrester Research Inc. in Cambridge, Mass., said that Delta's use of virtualization technology is aimed at solving a common problem that is increasingly challenging companies that are moving toward an SOA: making the IT infrastructure transparent to an application as it moves within the company. ▶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The World According To Dennis

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BRIEFS

Sun, StorageTek Unit Sued for Fraud

Netbula LLC has filed a lawsuit in federal court in Oakland, Calif., against Sun Microsystems Inc. and its StorageTek unit alleging copyright infringement and fraud. Netbula, a development tool maker, claims that Sun and StorageTek breached a contract with it and misrepresented their use of its technology. In addition to financial restitution, the suit seeks to stop Sun and StorageTek from using Netbula technology.

IBM to Acquire Security Firm

IBM plans to acquire privately held Consul Risk Management Inc. in an effort to improve the compliance and security auditing capabilities of its Tivoli systems management software. The deal is expected to close early next year. Consul will become part of IBM's Tivoli Software unit. Terms of the deal were not disclosed.

OSDL CEO Resigns Amid Layoffs

Open Source Development Labs Inc. has laid off nine workers, or about a third of its staff, and announced the resignation of CEO Stuart Cohen. The nonprofit Linux development consortium said that it will focus on fewer projects, allowing it to cut testing and engineering positions. The consortium will now be headed by its former chief financial officer, Mike Temple.

Business Objects Buys SaaS Vendor

Business Objects SA has agreed to acquire Nsite Software Inc., maker of a software-as-a-service delivery platform. Terms of the deal were not disclosed. Business Objects said it will integrate some of Nsite's SaaS technologies into its own product line, allowing it to release some of its business intelligence software in the form of services. Nsite's On Demand Enterprise product is used to develop applications that can be accessed via a Web

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[ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL]

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. . . legally valid registered mail. Not every missive you send is worthy of registered mail, but for some documents and messages, you want proof that the recipient got what you sent. The U.S. Postal Service charges $8.77 for a 3-ounce hard-copy letter sent via registered mail. What do you do if you want to ensure that your electronic messages get through? Zafar Khan, CEO of RPost U.S. Inc. in Los Angeles, says his company will transmit an e-mail and any attachments for about 60 cents and give you the same delivery guarantees as the Postal Service. RPost doesn't store any of your data, but it gives you a receipt number that can reconstruct the communication chain and the content of messages. The online service, which works with Outlook, Notes and GroupWise as well as BlackBerry and Treo devices, was audited and accredited by the Postal Service in 2002. It primarily has had government clients until now. But next year, Khan says service providers of various stripes will offer it as a premium service for their corporate customers. And next week, RPost will add a feature that lets end users turn any Microsoft Office document into a PDF file.

KHAN: Make sure vital messages get delivered.

InfiniBand jumps from high-performance . . .

. . . computing to being a data center option. With most hardware makers adopting InfiniBand as the standard way to interconnect racks of blade servers, the 10Gbit/sec. protocol is making inroads into data center operations. The implications are significant, says Lloyd Dickman, chief technology officer at QLogic Corp., an InfiniBand tools vendor in Aliso Viejo, Calif. For one thing, InfiniBand is no longer seen as an overly complex technology that's limited to connecting tens of thousands of servers for supercomputing applications. InfiniBand management software is making it more approachable for data center admins, Dickman says. The protocol's 100-meter reach between nodes makes it an excellent choice within a data center and for connecting sites between buildings or floors, he adds. And he claims that it's ideal for databases burdened with heavy transaction loads. "Eventually, you'll be able to fold all your data center network onto InfiniBand," Dickman predicts.

Switch to SaaS salvages . . .

. . . software vendor's future. Next month, content management system developer Astoria Software Inc. will formally shift from selling on-premises software to being a software-as-a-service (SaaS) provider. The long buying process for licensed software almost killed the San Mateo, Calif.-based company, says Dan Ortega, its vice president of marketing. Earlier this year, Astoria's board of directors felt that "the meteor had hit, the dinosaurs were dying, and we had to grow hair in a hurry," Ortega says. That lifesaving hair came in the form of a SaaS version of Astoria's eponymous technology. Buying services is a much faster process for users, Ortega says. Astoria targets manufacturers with its system for managing structured content, such as product specifications. Pricing is based on the number of end users.

ORTEGA: SaaS could save Astoria's bacon.

Overseas troops have collaboration tool . . .

. . . at their fingertips – for free. Kary Zate, a marketing manager at WebEx Communications Inc. in Santa Clara, Calif., thinks it's about time the online conferencing company began talking up the fact that U.S. troops based overseas can use its WebOffice collaboration tool. Although it has been available to the troops for more than two years, WebEx never promoted the service, letting it propagate by word of mouth — with minimal results. Zate says he wants to let everyone know so more soldiers and sailors can take advantage of the service. WebOffice lets troops share documents and photos, keep contact lists and assign password-protected account access rights to family members and friends. If your company has reservists who are overseas, you can help them set up accounts at *http://weboffice.com/go/troops/.*

73
Overseas troops using WebEx's free collaboration tool.

Open-source tool cuts development . . .

. . . complexity, of sorts. This week, the popular Eclipse integrated development environment gets another boost, with the release of Mylar 1.0, an open-source technology designed to dramatically reduce the clutter on the workspaces of software developers, so they can focus on information related to the specific task at hand. Mik Kersten, Mylar project lead at the Eclipse Foundation in Ottawa, says the goal "is to reduce information overload and improve a programmer's ability to multitask." Mylar integrates with other open-source tools, such as the Bugzilla bug-tracking system. Kersten says development managers can expect an increase of 50% to 100% in the time Eclipse programmers spend coding when it's used. ▸

2.27M
Number of Eclipse users worldwide, per IDC.

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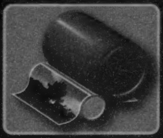

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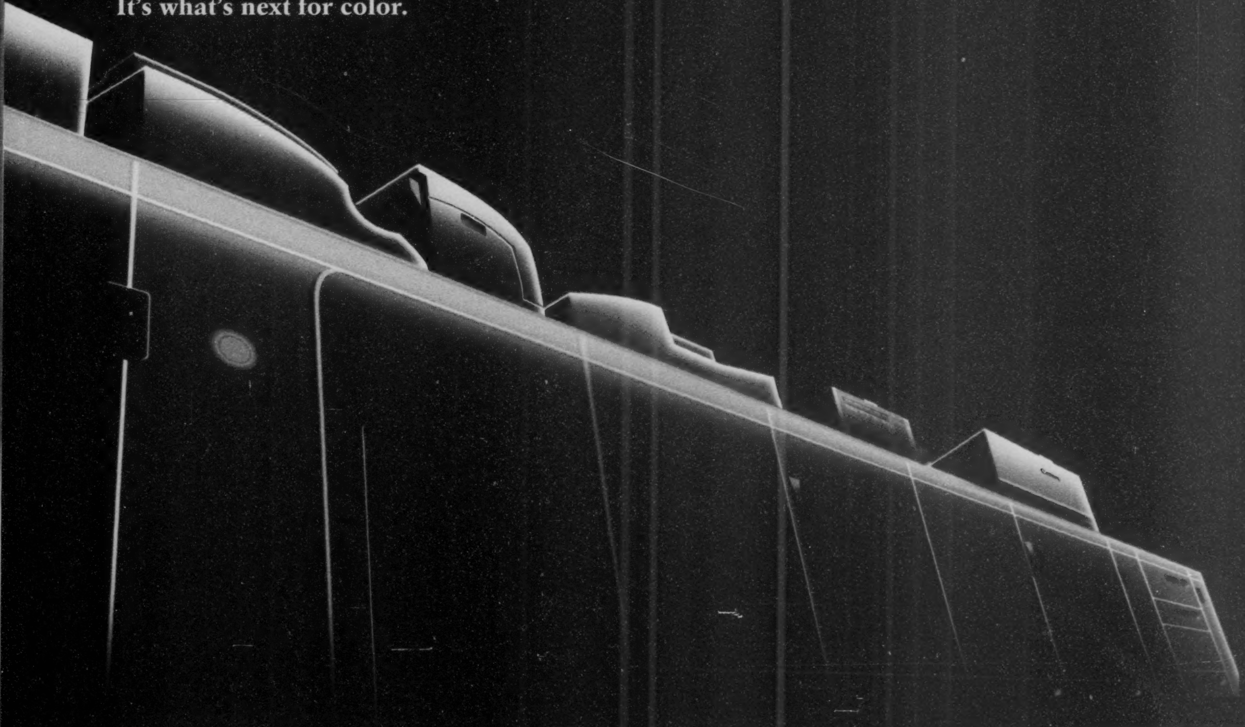

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BRIEFS

Yahoo Realigns Ops; COO to Depart

Yahoo Inc. plans to reorganize its operations into three new units: an audience group, an advertiser and publisher group, and a technology group. The head of each group will report directly to CEO Terry Semel. The shake-up also includes the departure of Chief Operating Officer Dan Rosensweig, who will leave Yahoo at the end of March. The new units will begin operating on Jan. 1.

Dell, Microsoft Roll Out Storage System

Dell Inc. and Microsoft Corp. have jointly rolled out a new storage system for file and application data that uses products from both vendors. The system integrates Dell's PowerVault NX1950, a serial-attached SCSI back-end storage array, with the Windows Unified Data Storage Server 2003, a file server with management tools. The system is priced from $17,000.

Washington Settles First Spyware Case

The state of Washington has settled the first case prosecuted under its 2005 Computer Spyware Act. Under the settlement announced last week, Secure Computer LLC and its president, Paul Burke, will pay $725,000 in legal fees and $200,000 in penalties and will reimburse its Washington customers $75,000. The state accused the vendor of marketing its product via deceptive spam and pop-up ads.

LSI to Buy Agere For $4B in Stock

LSI Logic Corp. has agreed to acquire Agere Systems Inc. for about $4 billion in stock. The combined firm will have 9,100 employees and an estimated $3.5 billion in annual sales. The companies said they expect to cut combined costs by about $125 million annually, starting in 2008, through "increased efficiencies in manufacturing and operating expenses." They did not say whether they expect layoffs.

Oracle and Bug Hunters Clash Over Flaw Reports

Vendor blasts 'irresponsible' practices; researchers say their work helps users

BY JAIKUMAR VIJAYAN

THE LONG-STANDING tension between software vendors and independent researchers who try to find security holes in products came into public view late last month, when Oracle Corp. criticized bug hunters after it came under fire for its security practices.

In a message posted Nov. 27 in a blog on Oracle's Web site, Eric Maurice, manager of security in the company's global technology business unit, said Oracle wouldn't let external perceptions drive its software security policies. Maurice reiterated Oracle's commitment to strong security practices but said it would continue to prioritize vulnerabilities based on their criticality and not on who had discovered them.

He also blasted security researchers who disclose so-called zero-day flaws before vendors make fixes available for them. "We consider such practices to be irresponsible, as they can result in needlessly exposing customers to risk of attack," Maurice wrote.

The blog post was an apparent response to what Maurice described as "a flurry of articles and blog entries" about Oracle security issues.

Database Holes

For example, Next Generation Security Software Ltd., a Surrey, England-based security research firm that has consulted with Microsoft Corp. on security issues in the past, released a study showing that Oracle's databases have had far more vulnerabilities than Microsoft's SQL Server has had over the past six years.

Meanwhile, a security researcher in Argentina announced — then abruptly canceled — plans to release information about an Oracle zero-day flaw every day for one week in December.

Cesar Cerrudo, founder of Argeniss, an IT security firm in Buenos Aires, wouldn't explain why he dropped the bug-disclosure plans. But via e-mail, Cerrudo defended the work done by security researchers and said vendors should be more concerned about "responsible software development" than about proper vulnerability disclosure practices. "Vendors are used to researchers playing nice," he wrote. "The situation should change. Research costs thousands of dollars, and right now vendors are getting [it for] free."

H.D. Moore, founder of the controversial Metasploit Project, which releases vulnerability information and tool kits for writing attack code, rebutted the notion that such initiatives only benefit malicious hackers. The information made available by Metasploit "puts the 'good guys' on equal footing with the folks who already have the skill to launch these types of attacks," Moore wrote as part of an e-mail interview (see Q&A below).

Security flaws are unlikely to remain undiscovered for long, whether bug hunters go looking for them or not, said Robert Palmer, vice president of IT at Lenox Inc., a Lawrenceville, N.J.-based maker of tableware and giftware.

Independent researchers provide "a valuable service," not just to users but to software vendors as well, Palmer said. He added that he wants to see vendors bring bug hunters into the software development cycle. One way to do so would be to give researchers access to alpha or beta code "with the express intent" of letting them try to crack it before the software is commercially released, Palmer said.

But Andrew Plato, president of Anitian Enterprise Security, a consulting and systems integration firm in Beaverton, Ore., said researchers should give vendors at least 30 days to address vulnerabilities before reporting them publicly. "One of the largest problems with independent vulnerability research is blackmailing and grandstanding," Plato said.

He added that as long as bug hunters follow generally accepted flaw-reporting practices, they serve an important role. "Obscurity is not security," Plato said. "It's better to know about a bug and get it fixed than to have it hidden." ◆

Security Researcher Defends Efforts to Find Flaws

To some IT managers, vulnerability researchers such as **H.D. Moore** are knights in shining armor for their efforts to uncover security flaws in software. Others argue that the only people being helped are malicious hackers. In an e-mail interview with *Computerworld*, Moore discussed his involvement in vulnerability disclosure efforts such as the Metasploit Project. Excerpts follow:

How exactly is the work being done through initiatives like the Metasploit Project helping to improve overall software security? The availability of tools such as the Metasploit Framework allows anyone to learn more about security and the exploit process in general. Network administrators use the framework to justify patch installations, software developers use it to verify patches in their software, and security analysts use it to perform penetration tests. As more people become aware of software security flaws and their impact on their business, the software vendors will be held to higher standards of product security.

What would you say to critics of such efforts who argue that ultimately they help only the bad guys? Every major security vendor uses the tools developed by the Metasploit Project to test their products. Almost every security consultancy uses Metasploit tools to perform penetration tests and risk assessments. The Metasploit Project puts the "good guys" on equal footing with the folks who already have the skill to launch these types of attacks.

But some critics say many vulnerabilities are obscure and hard-to-exploit flaws that would remain hidden if security researchers didn't go looking for them. These folks sound naive. History has shown that many of the worst security flaws were made public only after a bad guy was caught in the act. When I discover a new vulnerability, I have to assume that someone else found it first.

What's your opinion on responsible disclosure of vulnerabilities? There is a myth that "responsible disclosure" means always waiting for a vendor to patch a flaw. I have been reporting vulnerabilities to vendors for nearly 10 years and still believe that forcing a vendor's hand by releasing [information about a flaw] early is the responsible thing to do under the right conditions.

How much time should vendors be given to fix flaws? It depends on the vendor, how fast they respond and whether I'm the only one that knows about a given vulnerability.

– JAIKUMAR VIJAYAN

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DOJ Report Airs Concerns About Key FBI Project

Agency accepts recommendations but says Sentinel system remains on track

BY LINDA ROSENCRANCE

THE U.S. Department of Justice's inspector general raised concerns last week that the FBI doesn't have enough money to fully fund development of its Sentinel case management system.

In a 112-page report that was released with some portions blacked out, the inspector general's office said the FBI has made progress in addressing problems associated with the Sentinel project by pursuing plans for independent verification and validation of the software and for sharing information with other agencies.

However, questions remain about the available funding for the system and the FBI's lack of contingency plans for identified project risks, according to the report. The report also said that the FBI's $425 million cost estimate for Sentinel couldn't be validated and that the actual expense could be either higher or lower.

In a statement posted on its Web site last week, the FBI said Sentinel is "within cost and schedule." But the agency said in a written response to the inspector general dated Nov. 7 that it agreed with a series of recommendations made in the report and was working to implement them.

For example, the inspector general said the FBI should periodically update its cost estimates as actual expenditure figures become available and finish developing contingency plans for potential problems, such as data migration difficulties. The agency should also fill vacant project management positions as soon as possible, the inspector general advised.

Off the Shelf

Sentinel is designed to provide the FBI with an electronic case information management system that includes automated workflow processes, search capabilities and support for sharing data with other law enforcement agencies and the intelligence community.

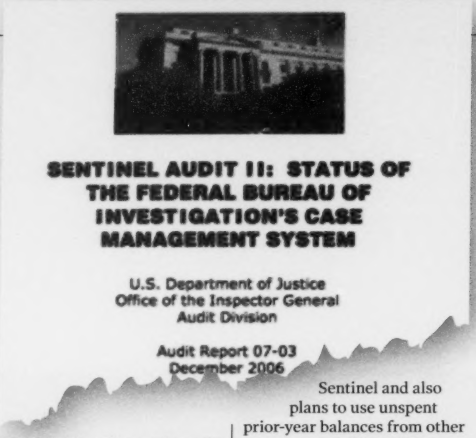
The project follows an unsuccessful three-year, $170 million effort to develop a system called the Virtual Case File. Unlike the VCF, which was to have been custom-built, Sentinel will be based on off-the-shelf software.

The FBI in March awarded a development contract to Lockheed Martin Corp. that calls for a phased approach, with the final phase scheduled for completion in December 2009. That contract was valued at $305 million, and the FBI estimates that it will cost another $120 million to staff its Sentinel program office and provide support to Lockheed Martin and its subcontractors.

But in last week's report, the DOJ inspector general said a recent audit "found that the FBI faces uncertainty" over its ability to get the full $156.7 million needed for Sentinel during the government's current fiscal year.

President Bush's fiscal 2007 budget request for the agency includes only $100 million for the project, the inspector general said. The FBI expects to have about $50 million remaining from the first phase of Sentinel and also plans to use unspent prior-year balances from other accounts to make up the gap, according to the report. But taking money from other programs could erode the FBI's capabilities in counterterrorism, cybercrime and other operational areas, the inspector general warned.

In the statement about the audit on its Web site, the FBI said the additional fiscal 2007 funding needed for Sentinel "has long been identified from existing FBI balances and will not impact operational programs." Sentinel's projected cost remains at $425 million, the FBI added, saying, "Characterizations to the contrary are misleading." ▸



SENTINEL AUDIT II: STATUS OF THE FEDERAL BUREAU OF INVESTIGATION'S CASE MANAGEMENT SYSTEM

U.S. Department of Justice
Office of the Inspector General
Audit Division

Audit Report 07-03
December 2006

The DOJ's inspector general says the FBI "faces uncertainty" on funding for the Sentinel project.

New Office File Format Gets Nod as Standard

BY ERIC LAI

Microsoft Corp.'s Office Open XML file format won approval from the Ecma International standards body last week, giving it needed credibility as a rival to the OpenDocument format. But Ecma's vote could also make it easier for users and vendors to justify supporting each of the formats.

"This doesn't make us want to go back to Office, [but] it encourages us to use both formats," said Danny J. Wall, a network engineer at Health First Inc. in Rockledge, Fla.

For the past two years, Health First has been slowly shifting its 5,000 desktop users from Office 97 to OpenOffice.org, an open-source application suite. Using OpenOffice is reducing the health care provider's costs and has required less retraining of employees than upgrading to Office 2003 would have, Wall said.

By default, OpenOffice stores files in the Open Document Format for Office Applications, or ODF. But it can also import and export files in earlier versions of Microsoft's Office formats. Because most of Health First's files are still in Microsoft formats, and in recognition of Office's continued dominance at other companies, Wall said he isn't forcing employees to start saving files in ODF.

Not 'All the Way Open'

Dave Jenkins, chief technology officer at Backcountry.com, an online retailer in West Valley City, Utah, said he wasn't impressed by Open XML's adoption as an Ecma standard.

"In the long run, I think everyone will go to XML, but I don't think they'll go to Microsoft's XML," he said. "If something is going to be open, it has to be all the way open."

Backcountry.com runs OpenOffice and Ubuntu Linux on about two-thirds of its 300 PCs, saving $250 per system annually compared with the cost of its machines that still have Windows XP and Office 2000, Jenkins said.

But that doesn't mean the retailer has turned its back on Microsoft's formats. Jenkins has set OpenOffice so that files are automatically saved in Office formats. He said he would prefer to use ODF but adopted a pragmatic approach to minimize "yelling and screaming" about incompatible file formats.

In Massachusetts, where the state's Information Technology Division made a controversial decision to adopt ODF as a standard file format last year, the official response to Ecma's vote on Open XML was noncommittal but open.

"Microsoft's decision to bring their new software format to an international standards body and [Ecma's] vote validate our efforts to adopt open standards," acting Massachusetts CIO Bethann Pepoli said vie e-mail.

Pepoli added that the IT division will review the standards work done by Ecma's Open XML committee and will consider including the Microsoft format in the next version of the state's Enterprise Technical Reference Model blueprint.

Ecma's general assembly voted 20-1 to approve Open XML as a standard, with IBM the lone holdout. The Geneva-based group now plans to submit Open XML on a fast-track basis to the larger ISO standards organization, which officially published an ODF standard on Nov. 30.

In advance of Ecma's vote, Novell Inc. last week said it would add Open XML support to its version of OpenOffice. Corel Corp. made a similar announcement in late November, saying it would support both ODF and Open XML in its WordPerfect software after previously leaning toward ODF.

Neither IBM nor Sun Microsystems Inc. would comment on whether they plan to adopt Open XML in their desktop suites. IBM's Workplace and Sun's StarOffice use ODF as a default but also support Microsoft's older Office formats. ▸

IBM
Rational.

_INFRASTRUCTURE LOG

_DAY 19: The business is, uh, coming apart. I.T. isn't in sync with the suits. No one's sure what they need to do. It's totally out of control.

_DAY 20: Gil fell into the crack. Maintenance is on it.

_DAY 24: I've got it. IBM Rational. A modular platform that lets us govern the entire development process and align it with our business goals. Now everyone's on the same page. Plus, we can ensure our software's in compliance and implement a service oriented architecture.

_Everyone's glad the crack is gone. Gil says his nightmares about "the dark place" are practically over.

Get our white paper on governing development at:
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GLOBAL DISPATCHES

An International IT News Digest

Cisco Plans to Set Up More Facilities in India

NEW DELHI

CISCO SYSTEMS Inc. CEO John Chambers announced here last week that the company plans to open a "globalization center" in the Indian city of Bangalore as part of an effort to boost its visibility among users outside the U.S.

Chambers also said Cisco plans to work with a Taiwanese partner to open a pilot manufacturing facility in Chennai, India, by next March. The plant, Cisco's first production facility in the country, will initially build IP phones for the Indian market.

The new facility in Bangalore, which is being called the Cisco Globalization Center East, will employ about 1,000 people within two years, according to Chambers. He didn't provide details on Cisco's plans for the center, but a spokesman said it will include product support and software development operations.

Chamber said the facility will be managed by Wim Elfrink, a senior vice president who runs Cisco's worldwide services and support operations. Elfrink is being given the additional title of chief globalization officer and will relocate to Bangalore next month.

■ JOHN RIBEIRO, IDG NEWS SERVICE

GLOBAL FACT

$111M

Total spending on IT security software and appliances last year in the Persian Gulf states of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

SOURCE: IDC, FRAMINGHAM, MASS

China Mobile, Microsoft Sign a Push E-mail Pact

HONG KONG

CHINA MOBILE Communications Corp., the largest mobile network operator in China, this month plans to begin offering its subscribers a push e-mail service based on Microsoft Corp.'s Windows Mobile operating system.

The two companies jointly announced plans for the new offering at last week's ITU Telecom World 2006 conference here. Beijing-based China Mobile said the Push Mail service will let users with mobile devices running Windows Mobile 5.0 send and receive e-mail messages. Pricing for the new service wasn't disclosed.

Earlier this year, China Mobile began offering Research In Motion Ltd.'s BlackBerry e-mail service. That is priced at 398 renminbi ($50.85 U.S.) per month for transfers of up to 50MB of data, or 598 renminbi ($76.41) for 400MB of data.

■ SUMNER LEMON, IDG NEWS SERVICE

Yahoo Offers Web Site For Filipino Workers

SINGAPORE

YAHOO INC. last week launched a Web site aimed at helping Philippine nationals who work overseas to stay in touch with their families and friends at home.

"Many Filipino families are living apart and breaking down because there is no real communication," said Reza Behnam, managing director of Singapore-based Yahoo Southeast Asia.

Behnam said Yahoo is working with the Philippine government's Overseas Workers Welfare Administration to encourage Filipinos who are working outside the country and their families to use the new Web site, which is called Pinoy Connect.

The Web site will also offer news pages tailored for overseas workers, Yahoo said. The company estimated that about 8 million Filipinos have taken jobs elsewhere, mostly in other Asian nations and the Middle East.

■ SUMNER LEMON, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

Satyam Computer Services Ltd. last week said it is setting up a 40-seat development center in Bangalore, India, that will do software work for Sony Corp.'s European operations. Satyam will handle SAP application development and support, application integration and software testing for Berlin-based Sony Europe. Separately, Satyam said it is adding a 2,000-seat facility in Malaysia that will do work for users worldwide.

Huawei Technologies Co. plans to increase its research and development investments in an effort to make itself less dependent on mobile phone technology from other vendors. A Huawei executive said at ITU Telecom World 2006 in Hong Kong last week that the Shenzhen, China-based company owns only about 5% of the patent rights on the components used in its handsets.

■ JOHN BLAU, IDG NEWS SERVICE

SAP AG last week released the first in a series of planned enhancements to its mySAP ERP 2005 software. SAP previously brought out full new versions of its ERP applications every 12 to 18 months, but now it plans to release two or three sets of added features annually through 2010.

■ CHINA MARTENS, IDG NEWS SERVICE

School Taps Interim CIO While Search Continues

Professor to take over IT at Ohio U.; current CIO will be given new job

BY TODD R. WEISS

Ohio University last week named the head of its electrical engineering and computer science school to take over IT operations on an interim basis from outgoing CIO William Sams, who said in July that he would step aside following a series of security breaches.

Sams has continued working as CIO while OU has been searching for a replacement. But the Athens, Ohio-based university announced last Monday that Shawn Ostermann, an associate professor who is a member of the school's CIO search committee, will temporarily begin running IT on Jan. 1.

OSTERMANN: Strengthening data security at OU will be a top priority.

That doesn't mean Sams will be leaving OU, though. The university said he plans to remain an associate provost and work on IT governance and other "technology-related projects" while also assisting Ostermann with the transition.

Neither Ostermann nor Sams could be reached for comment last week.

In a statement, Ostermann said that he will focus on laying the groundwork for a permanent CIO and that his top priorities will be to strengthen data security and involve OU's faculty, staff and students in setting IT priorities.

"As a member of the CIO search committee, I've become very familiar with the challenges and opportunities facing the IT group," he said. But, he added, "there's a great deal of consensus about what needs to be done."

OU spokesman Joe Brennan said Sams will not be directly involved with the university's IT organization in his new role.

"We want to use his skills on IT projects but not on central IT," Brennan said. "Even though he admits, and we agree, that he's not the right person to lead the IT department, Bill does have talents."

One of the reasons Sams will remain at OU is because he has a three-year contract that must be honored, added Brennan.

Candidates Rejected

According to Brennan, school officials decided to name an interim CIO because they expect that the search process will take another three to six months and that the new IT chief won't start until next summer because of academic-year commitments. OU officials recently rejected a list of CIO candidates submitted by a search firm and asked for more choices, he noted.

Ostermann, who has taught at OU for 13 years, specializes in computer networking and also has expertise in data security, according to the university. While he holds the CIO job, he will be responsible for OU's computer, infrastructure and security policies and its central e-mail, telephone, computer networking and administrative data services.

The interim CIO announcement came three weeks after OU's provost rejected a grievance committee's recommendation and upheld Sams' August decision to fire two IT managers for "nonfeasance" of their duties in connection with five breaches that were discovered in April, May and June.

The firings, and a wider restructuring of OU's central IT unit, followed the July announcement by Sams that he would resign as CIO because the IT organization needed "a new energy level and skill set . . . to realize its potential." ▸

IBM

_INFRASTRUCTURE LOG

_DAY 12: No one can get real-time answers. No one can collaborate. Unmanaged public IM is a security nightmare.

_Gil brought in a "collaboration accelerator." I said it looks like a cannon. He said I had a small mind.

_DAY 14: The answer: IBM Lotus® Sametime® 7.5. It's not just IM and Web conferencing, it's an affordable platform for running the business in real time. It's encrypted. Has tons of features like VoIP and location awareness. And it works seamlessly with leading public IM networks. Everyone has real-time answers now.

_We've even recovered most of our employees.

Lotus.

Download the Lotus Sametime 7.5 demo at:

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Travel Guard Tightens Development Processes

New tool and formula help ensure that high-priority projects get done

BY HEATHER HAVENSTEIN

TRAVEL GUARD International has completed an overhaul of its software development processes as part of an effort to better prioritize the 600 to 700 projects in the company's IT pipeline at any one time.

The Stevens, Wis.-based provider of travel insurance plans has spent the past 11 months reworking its processes for ranking and scheduling development projects, Tom Nohelty, vice president of IT at Travel Guard, said last month.

Prior to implementing the new processes, the company could not rank projects in order of importance, so IT developers "were basically driven by the emergency of the day," Nohelty said.

Strategic, long-term projects were regularly pushed aside for smaller projects that cropped up, he said. "We were always too busy doing that 'in your face' kind of project. It was really whoever screamed the loudest," he said.

Late last year, the AIG Travel Services Inc. subsidiary came up with a formula to begin ranking development projects according to strategic relevance and overall return on investment. It then set about looking for a tool to help automate the use of that formula in managing the projects, Nohelty said.

Borland's Tempo Chosen

After an evaluation of three tools, Travel Guard in April selected Borland Software Corp.'s Tempo IT management and governance product because of its strong portfolio management, time-tracking and scheduling capabilities, Nohelty said.

The software cost the company $50,000, he noted.

Travel Guard had first looked to use the Microsoft Project software that the company's project management office was already using. "It seemed to be the path of least resistance," Nohelty said. "[But] it was very difficult to install and very difficult to maintain."

The company also evaluated a portfolio management tool from Three Olive Solutions LLC in Elmhurst, Ill., but found that it lacked the scheduling and time-tracking capabilities required by the IT operation, Nohelty said.

Travel Guard had previously used two custom-developed time-tracking tools, one for Web development and one for building back-office applications, he said. The Tempo tool combines those capabilities.

The new management process and tool set has eliminated the need for regular meetings between IT and the business champions — who come from every segment of Travel Guard's business — to discuss the importance of potential projects, Nohelty noted.

At those meetings, IT "could never tell anybody when we were going to start [a] project or when it might end," Nohelty said. Now, he added, "we can tell them within a few days when we will start a project and when it will get done."

According to Jason Schilling, senior software architect at Travel Guard, the Tempo tool is making the company's developers more productive.

In the past, once a large project was completed, its developers had no assignments until the next large project commenced. Now, he said, developers are immediately assigned to other projects in the interim.

"Now, when a developer is finished with a larger task, they can start knocking out some of those smaller projects," Schilling said. Such scheduling improvements helped the company boost the number of projects under way at any one time by 15%, he noted.

Carey Schwaber, an analyst at Forrester Research Inc., said that portfolio and project management are among the least mature IT areas in most companies today.

"It is chaos for most organizations," she said. "It really requires a commitment from IT management to be more disciplined with aligning IT resources with business needs." ▸

Projected Growth of Worldwide Project and Portfolio Management Applications Revenue

	2006	2007	2008	2009	2010
Revenue	$2.5B	$2.8B	$3.0B	$3.3B	$3.5B
Growth	8.5%	8.7%	8.6%	8.5%	8.3%

SOURCE: IDC, APRIL 6, 2006

Hyperion Unveils Gadgets for Real-Time BI

Will provide IM audit capabilities, Windows access

BY HEATHER HAVENSTEIN

Hyperion Solutions Corp. has unveiled software that it says can split its business intelligence and performance management products into small, customized applications that provide real-time data feeds to desktop systems.

The new Hyperion System 9 Smart Space tool, introduced on Nov. 30, can create small, single-purpose applications called "gadgets" or "widgets" that sit on the desktop and continuously feed customized BI data to users, according to Hyperion.

Smart Space, based on a service-oriented architecture, runs on Microsoft Windows XP and Vista and will allow users — without the intervention of IT — to link multiple gadgets to access data from various sources, said Srikant Gokulnatha, Hyperion's senior director of product marketing.

Users can access the tool through the Windows interface, Gokulnatha noted.

Bart Klein, vice president and manager of application development at UMB Financial Corp. in Kansas City, Mo., said he hopes that the new software can make BI attractive to more employees at the bank holding company.

"We are really hoping [that] through the use of gadgets we'll be able to put out some easy interfaces a person could subscribe to . . . to make [BI] less intimidating," Klein said. "It will allow my users to be able to get to certain bits of data that currently exist inside Hyperion very quickly by having the gadget running on the desktop all the time."

Save and Store

The tool's ability to save and store instant messages for auditing purposes could help expand the use of BI among the bank's 300 Hyperion 9 users, Klein noted.

"IM really hasn't been blessed as a tool within the bank because . . . you have to have ways to track it back and log it," he said. "[Now] we will be able to provide a fully sanctioned IM environment that gives us auditing and allows users to collaborate a little quicker."

The new Hyperion technology, slated to ship by mid-2007, is designed to give business users easier access to BI data than they have with traditional systems, which can be accessed only through a separate user interface, Gokulnatha said.

The new system also requires less training than older systems, he added.

Gokulnatha said such ease-of-use features will likely make the new tool appealing to many of the 80% of corporate users who don't use business intelligence today.

Dan Vesset, an analyst at IDC in Framingham, Mass., said Smart Space is different from other BI systems because it injects BI to run directly on Windows instead of requiring that users log onto a separate application or launch a browser to access data.

The gadgets "capture the user very early in the process, when they come to work and turn on their PC," Vesset said. "The simpler you can make [BI], the more likely people are to start using it."

In most companies today, only 20% of users who could benefit from BI are accessing the software, he said. ▸

> **“IM really hasn't been blessed as a tool within the bank because . . . you have to have ways to track it back and log it. [Now] we will be able to provide a fully sanctioned IM environment that gives us auditing and allows users to collaborate a little quicker.**
>
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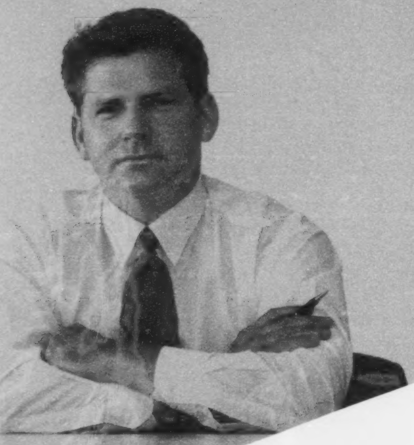

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PREMIER 100 IT LEADERS 2007

12.11.06

What's Inside

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"Putting yourself in uncomfortable situations – that's what you've got to do.

ANTHONY CICCO JR., FORMER DEPUTY CHIEF ADMINISTRATIVE OFFICER AND CIO, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

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"You've got to fight the glazed-over look. You've got to learn to invigorate IT discussions and make them interesting.

NORBERT KUBILUS, CIO, SUNTERRA CORP.

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"You need to plan your thinking time in a very wise way. No matter how much you can anticipate what is coming next, there is a point where you need to make the move. That's very relevant to the way we do business.

FILIPPO PASSERINI, GLOBAL SERVICES OFFICER AND CIO, THE PROCTER & GAMBLE CO.

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"Anytime you go to market to sell some new business, technology is always a topic. . . . I don't believe you can talk about business strategy independent of a technology strategy anymore. They are one and the same.

DARRYL LEMECHA, CIO AND SENIOR VICE PRESIDENT OF SHARED SERVICES, CHOICEPOINT INC.

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DON TENNANT

True Adorning

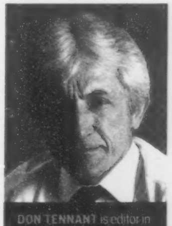
IF YOU were to ask this year's *Computerworld* Premier 100 IT Leader honorees to identify the skills that were most essential to them in achieving their goals, you'd probably be able to predict many of the top responses before you even posed the question. You might have guessed that "the ability to lead" would be No. 1 on the list of must-haves and that the honorees would also cite skills such as strategic thinking, diplomacy, business acumen and technological prowess.

You would likely find it no surprise, moreover, that No. 2 on the list is "the capacity to communicate." What might not be so readily apparent or easily appreciated, however, is *how* the very best IT leaders communicate. But you won't get very far into reading our Premier 100 special report before it hits you, and as you continue reading, you'll see how recurrent that message is.

The message reminds me of one of my favorite quotations, an admonition that's attributed to a 19th century Persian prophet: "Let deeds, not words, be your adorning."

It's a sublime message, and one that's communicated with remarkable consistency by our Premier 100 honorees. Yes, it's important — crucial, in fact — to share ideas, specify goals, articulate strategies and build consensus. And yes, top-notch verbal and written communication skills are prerequisites for all of those activities. But it's what IT leaders convey without uttering or penning a word — and likely without even thinking about it — that is really the hallmark of their capacity to communicate.

Ask Lynn Vogel, CIO of the M.D. Anderson Cancer Center at the University of Texas in Houston, about the importance of communication, and he may well cite the example of how the center communicated a new governance model through a three-step process involving formal presentations, group discussions and e-mails. Yet, as essential as such a process might be, it's what Vogel and other IT leaders accomplish by their *actions* that lies at the heart of successful communication.


DON TENNANT is editor in chief of *Computerworld*. Contact him at **don_tennant@computerworld.com**

Anthony Cicco Jr., former CIO of the U.S. Government Accountability Office, conveys the message this way: "I tried to be on call for anyone who had an issue so nothing got hung up. Whenever you do that, people get energized and they know 'This guy's going to be here.' " His actions say it all.

Mark Hopkins, CIO of Academic and Community Hospitals at the University of Pittsburgh Medical Center, is "in the hospital at 3 a.m. to make sure a system works," says Liz Concordia, a senior vice president at the center. There's little that Hopkins could say or write that could communicate as much to his co-workers.

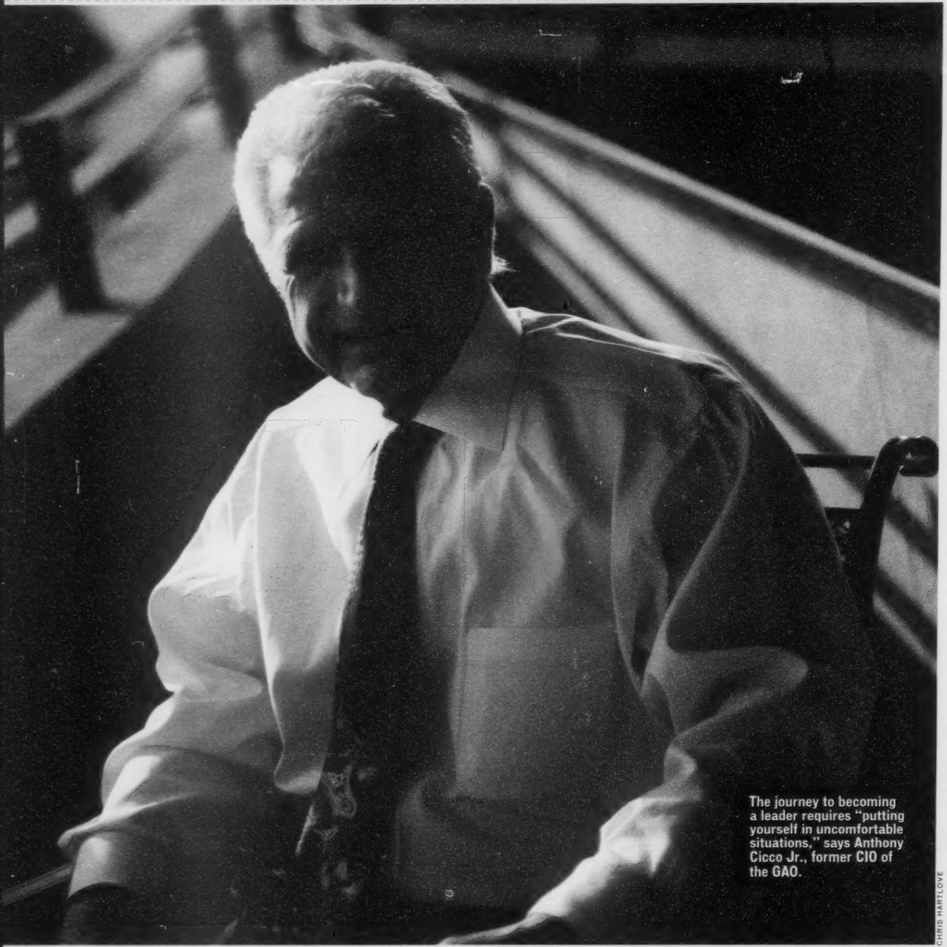
IT leaders' deeds speak for them, and it's what those deeds convey that gives CIOs what they need to effect positive change: influence.

Former Reynolds & Reynolds CIO Yen-Ping Shan speaks of IT now being "actually able to influence the business process and the business model." Yahoo Inc. CIO Lars Rabbe notes that in IT, "more than in other areas, you manage more through influence than positional power."

Gaining that influence, our Premier 100 IT Leaders find, can be rewarding in any number of ways.

"We can actually influence the job we're in," says Procter & Gamble CIO Filippo Passerini. "The dream job is not what the job is, but what we make it."

When Vogel, Cicco, Hopkins, Shan, Rabbe, Passerini and the other 94 *Computerworld* Premier 100 IT Leaders of 2007 are honored in March, a medal will bedeck each of them. But their deeds will always be their true adorning. ▸



The journey to becoming a leader requires "putting yourself in uncomfortable situations," says Anthony Cicco Jr., former CIO of the GAO.

CHRIS HARTLOVE

7 Essential Ingredients

A few parts technical know-how, a dash of diplomacy and a few other staples make up the traditional leader profile. The Premier 100 talk about their top seven must-have skills.

1 The Ability To Lead

Few are born leaders. Most spend countless hours cultivating the skill.

BY MARY K. PRATT

IN THE midst of the national crisis immediately following the Sept. 11 attacks, Anthony Cicco Jr.'s staff had to set up temporary offices for 1,700 displaced congressional workers. What normally takes months, Cicco accomplished in just four days.

It was a pivotal juncture, and Cicco says his leadership skills played a crucial role in his ability to carry out his duties as deputy chief administrative officer and CIO of the U.S. Government Accountability Office.

"I tried to be on call for anyone who had an issue so nothing got hung up. Whenever you do that, people get energized and they know 'This guy's going to be here,' " he says.

Cicco, who in October became senior principal for enterprisewide services at SRA International Inc., a technology consulting firm in Arlington, Va., admits that he hasn't always had the leadership skills to pull off such a feat. But Cicco says he knew what he needed to learn and worked hard at it.

In fact, this year's Premier 100 put the ability to lead at the top of the list of essential skills for IT managers. It's what business demands. "Companies are looking for people to provide leadership, to motivate and mentor people who come along so the projects keep rolling along smoothly," says Perry Paden, a managing director at recruiting firm MSI International in Atlanta.

But many IT executives quickly point out that no one is born with all the characteristics needed for lead-

Continued on page 26

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Why IT'S CRUCIAL

INFORMATION TECHNOLOGY executives agree on the need for leadership ability, though they give varying reasons for why it's needed.

Jo Ann Boylan, executive vice president and CTO at Ohio Savings Bank, says IT workers need leadership to bring together teams of diverse individuals with different skills. Lt. Col. Ben Allegretti, CIO of the U.S. Marine Corps Systems Command, says IT professionals need leadership because they must guide colleagues through constant change that cuts across organizational units.

"The ability to lead is critical in IT, because more than in other areas, you manage more through influence than positional power," says Lars Rabbe, senior vice president and CIO at Yahoo Inc. in Sunnyvale, Calif. "So to me, the right leader is the one who can make people perform and deliver to what your commitments are, and do it in a manner that people actually enjoy doing it."

– MARY K. PRATT

Continued from page 24

ership. Instead, IT managers must decide to pursue that goal and develop the traits — drawing on books, courses, relationships and experience — to become the business leaders that IT needs today.

"You make a decision in your mind that you want to be a leader," says Jo Ann Boylan, executive vice president and chief technology officer at Cleveland-based Ohio Savings Bank, which has nearly $16 billion in assets and branches throughout Ohio, South Florida and Arizona.

WHAT IT TAKES

Top executives say true IT leaders must be smart, confident, flexible, creative and persuasive. They must have integrity, initiative, empathy for others and courage of conviction. They also need technical expertise, experience handling difficult situations and great communication skills.

And while some leadership characteristics — namely extroversion and charisma — are innate, the other traits can be learned and developed.

"Leadership requires a combination of training, mentoring and taking on the tough assignments to stretch oneself in order to improve technical and leadership skills," says Raj Datt, vice president and CIO at Kennametal Inc., a Latrobe, Pa.-based company that supplies tooling, engineered components and advanced materials for production processes.

The first step in leadership development is to examine your strengths and weaknesses, Boylan says.

Consider how Cicco did that at the GAO. When he started in the CIO job in 1999, his staff gave him "less than favorable" marks on the annual employee feedback survey.

Those results didn't sit well with him, so Cicco took action. He opened a weekly management council meeting to all employees, helping to dispel workers' mistrust. He worked hard at communicating policies so everyone understood them. And he remembered to smile and say hello when walking by people, a step that helped build better relationships.

Cicco's leadership development didn't end there, though. He took courses through the Greensboro, N.C.-based Center for Creative Leadership and found ways to challenge himself on the job.

"Putting yourself in uncomfortable situations — that's what you've got to do," he says. That means volunteering to give presentations if you hate public speaking, or initiating meetings with other managers if you tend to be an introvert.

Others give similar advice, saying that aspiring IT leaders can develop skills through mentors, coaches, classes and on-the-job experience.

Gerald W. Shields, senior vice president and CIO at insurance provider Aflac Inc. in Columbus, Ga., has made leadership development a standard affair at his company. For the past four years, he has led lunchtime sessions every Monday and Wednesday, with about 35 to 40 supervisors and managers showing up at each session to talk about books, make presentations and discuss related topics.

Other organizations have made similar efforts to create a culture of leadership development.

W.W. Grainger Inc., a Lake Forest, Ill., company that supplies facilities maintenance products, recently hired Gene Kranz, a retired NASA flight director who helped save the crew of Apollo 13, to speak to about 500 IT and business workers.

Jarnail Lail, vice president of application services at the company, says such speakers inspire workers, but he adds that it takes more than one-time events to develop great leaders. "It's not one incident. It's a combination and accumulation," he says. "You have to have the desire to learn, to stretch yourself." ▸

Pratt is a Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

> **"LEADERSHIP REQUIRES A COMBINATION OF TRAINING, MENTORING AND TAKING ON THE TOUGH ASSIGNMENTS TO STRETCH ONESELF IN ORDER TO IMPROVE TECHNICAL AND LEADERSHIP SKILLS.**
>
> **RAJ DATT**, VICE PRESIDENT AND CIO, KENNAMETAL INC.

HOW TO Soak UP THE Skill

- Use your own observations, as well as those from career coaches and mentors, to identify which of your leadership skills are strong and which ones need work.
- Get help. Courses such as those offered by the Center for Creative Leadership, as well as books such as *The 7 Habits of Highly Effective People* (Free Press, 2004), by Stephen R. Covey, are worth the investment.
- Seek out challenges to help you develop and sharpen your leadership skills. Volunteer to make presentations if you're uncomfortable with public speaking. Work with a team to broker deals if negotiations make you nervous.
- Find a safe environment in which you can practice. Roundtable discussions, mentoring relationships and other professional relationships can be safe havens for discussing how to best lead a team.
- Don't wait for a crisis. True leaders demonstrate their talents – from the ability to communicate well to a willingness to listen – daily and consistently.

2

The Capacity to Communicate

The audience will change, but the messages must be consistent and candid.

BY DREW ROBB

THE IT profession might attract more than its share of introverts, but communication is downright essential for those at the top.

"It is critical to be able to articulate the benefits of information technology to the business or organization," says Maribeth Luftglass, assistant superintendent and CIO of the nation's 12th-largest school system, Fairfax County Public Schools in Virginia. "IT expenses are large, and one must continually justify the expenses and show the value added."

Luftglass, who joined the school system in 1999, oversees 420 IT staffers; 92,000 computers; an online learning system for 189,000 students, teachers and parents; 41,000 e-mail boxes; and a wireless network with 9,000 access points.

"In my position, I must gain the support of an elected school board for my enterprise technology initiatives," she says. "I strive to establish a strong relationship with each board member, and frequently provide public presentations on the initiatives and value to the education of our 165,000 students."

In addition to giving the superintendent, the school board and her colleagues monthly briefings on technology initiatives and trends, Luftglass invites the school board and district leadership to visit the schools twice a year to see the technology in use.

But communication must also go out to end users and IT staffers. Lynn

Continued on page 30

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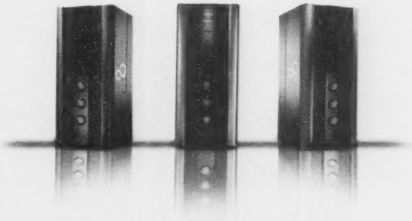

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VOLUME 1 – ISSUE 1 | Windows Server 2003 | For all stories go to

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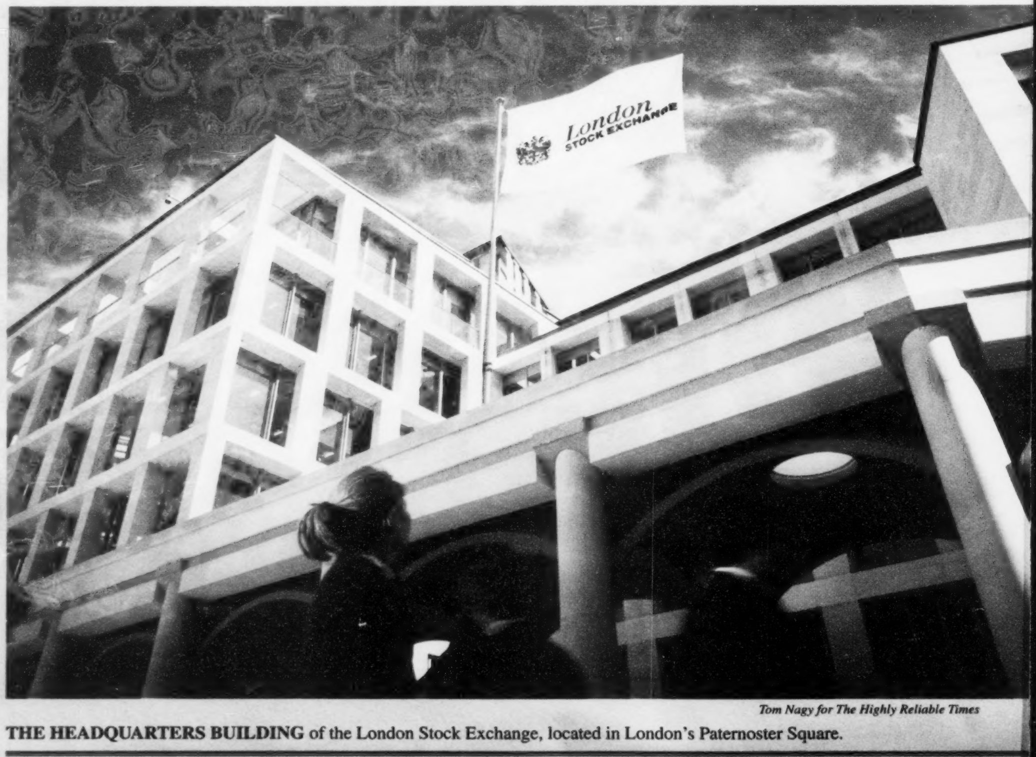

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Reliability Is Key in the "World's Capital Market"

By MICHAEL BETTENDORF

LONDON, Oct. 2006 — When an IT system must process 15 million real-time messages per day, with peaks at 2,000 messages per second, even one second of downtime counts. That's the pressure the London Stock Exchange faced when building Infolect, the Exchange's real-time stock-ticker information delivery system.

The solution had to have rock-solid reliability, nothing less. "Reliability is one of the key attributes of the Exchange in its technology systems. These systems have to work every day, 24/7, to make sure the markets are there," said CIO David Lester, who evaluated both Linux and Microsoft® Windows Server® 2003 for the Exchange's core technology systems. "We looked at a number of different platforms for our Technology Roadmap, and we lined up our business requirements with the capabilities of those platforms, and Windows Server was the clear choice."

In Lester's view, long-term reliability is a function of a solid relationship: "We wanted a deep partnership with an organization that could deliver the kind of mission-critical technology that we needed, and we felt Microsoft delivered just that."

For the full London Stock Exchange case study, plus other case studies and independent research findings on the reliability of Windows Server versus Linux, visit microsoft.com/getthefacts

RELIABILITY NEWS & NOTES: A study released yesterday found that Windows Server was

BREAKING NEWS: London Stock Exchange Achieves Record Reliability

London Stock Exchange CIO David Lester (above) cites Windows Server as key to maintaining system reliability and performance.

LESTER SPEAKS OUT:

> *"We looked at a number of different platforms for our Technology Roadmap, and we lined up our business requirements with the capabilities of those platforms, and Windows Server was the clear choice."*
>
> *–David Lester, CIO, London Stock Exchange*

JOURNALISM BEAT: Continued growth for reliability-focused newspapers A worldwide survey tracking trends in newspaper use has found some shocking results that were not

IT IS CRITICAL TO BE ABLE TO ARTICULATE THE BENEFITS OF INFORMATION TECHNOLOGY TO THE BUSINESS OR ORGANIZATION.

MARIBETH LUFTGLASS, CIO, FAIRFAX COUNTY PUBLIC SCHOOLS

CHRIS HARTLOVE

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H. Vogel, vice president and CIO at the M.D. Anderson Cancer Center at the University of Texas in Houston, says that when officials there decided to implement a new governance process that was far more complicated and involved more constituents than the previous one, they engaged in a three-step communication process. First, formal presentations were given to executives, department heads and managers. Next, small group discussions were held with IT department heads and staffers. And finally, companywide communications were disseminated in the form of e-mails from the CEO to the center's 15,000 employees, postings to employee Web sites and FAQs on the IT department's site.

The success of the project is clear on two counts: positive end-user reviews based on interviews by a consultant hired to evaluate the process, and an annual increase of 25% to 30% in IT investments since the new governance process was implemented.

"This is an example not only of the effectiveness of individual communication tools, but of how communication has to be part of the entire IT investment process," says Vogel. "We currently require a formal communications plan as part of every project that uses information technology."

WHAT IT TAKES

Communicating isn't easy for everyone, but it can be made less difficult even for the most reticent. "This skill can be improved through practice and coaching," says Larry Quinlan, CIO at Deloitte & Touche USA LLP, a 35,000-employee unit of Deloitte Touche Tohmatsu. "Of course, some are more natural than others, but improvement is not only possible, it is expected."

"Modeling behavior is often the best tutor," says Karen Hopkins, a principal at The Hopkins Group LLC, a Dallas-based human resources consulting and outsourcing firm. "As staffers witness the effectiveness of the leader's communication style, they will work at adopting these behaviors."

HOW TO Soak UP THE Skill

- The best way to improve – for the experienced and the reticent – is to practice, practice and practice.
- Get feedback on presentations, and use that insight to hone your skills.
- Observe others who are good communicators, and model your approach on theirs.

Vogel says he developed his writing skills in a college class that required a 10-page paper weekly and honed his verbal skills during the years he spent teaching at the University of Chicago and Columbia University. "There are three ways to increase one's communication skills: practice, practice and more practice," says Vogel. Luftglass concurs, suggesting that managers find opportunities for staffers to gain that experience.

"The more practice one has in public speaking, the easier it becomes," she says. "The best thing a manager can do to help others improve their communication skills is to provide opportunities for presentations in front of an audience to build confidence and skills."

Just speaking may not be enough, however. "Practice is useless without feedback," says Vogel. But don't count on getting it from your staff, he says, adding, "Who wants to tell their boss that they can't understand what he's saying?"

He lists several ways managers and their staffs can get both practice and feedback: joining the Toastmasters International club, giving presentations to small groups of customers or to peers at conferences, and taking a course or seminar that requires giving written and oral presentations critiqued by the instructor or other students.

To improve writing skills, ask a colleague to critique memos before they are sent, or submit articles for publication. Through the combination of practice, feedback and more practice, the skill can eventually be developed.

"Visibly successful CIOs make presentations at national conferences, write for magazines and journals, and are quoted in the press," says Vogel, "and they have executive leaders, direct reports and staff who understand where the organization is going and how they plan to get there." ◆

Robb is a Computerworld *contributing writer.*

Why IT'S CRUCIAL

SKILLED COMMUNICATORS aren't just engaging orators. They are often the people with open ears attuned to their group's needs.

"The first key in being a good communicator is being a good listener," says Karen Hopkins, a principal at The Hopkins Group. "Develop the patience to really listen, hear other points of view and formulate a thoughtful response."

This skill can then be integrated into public presentations.

"Communication is about getting your point across, about understanding your audience, about listening for feedback and about confirming that not only have you been heard, but that you have been understood," says Lynn H. Vogel, CIO at the M.D. Anderson Cancer Center.

– DREW ROBB

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3

The Power To Plan

Strategic thinking takes average CIOs to the level of leader.

BY MARY BRANDEL

IT'S UNUSUAL to hear a CIO talk about the positive side of having limited resources. But as Craig Berry, senior vice president of IT and CIO at software firm UGS Corp. sees it, he'd prefer to be handed a lean budget than an inflated one.

Why? Because frugality can be your greatest ally when it comes to planning, Berry says. "Without frugality, it's too easy to give all these wild horses in IT the opportunity to run free with technology and yet lack purpose," he explains. "But cost disciplines give us the opportunity to think very carefully about that next IT investment."

In other words, anyone can invest in technology, but it takes an IT leader to efficiently support the business's top objectives with effective, sustainable, low-cost systems that promote future integration, according to Berry. And that, he says, takes strategic thinking.

"Strategic thinking is the differentiator between a CIO and an effective CIO," agrees Vijay Sonty, CIO for the School Board of Broward County Education Technology Services in Sunrise, Fla.

A case in point is the business performance dashboard initiative that Berry's group launched two years ago and has been phasing in this year at Plano, Texas-based UGS. Rather than building a separate data warehouse using existing data to answer each reporting question, the company widened the effort by forming an "insight team" that encompasses both business and IT professionals. The team's goal was to define the company's biggest reporting challenges and the data improvements needed to address them.

With the committee's input, Berry's group designed an architecture that — because it integrates product, customer and industry hierarchies with consolidated application, warehousing and dashboard technologies — is able to report on a range of business questions. "If we'd jumped into a data warehouse without knowing our driving needs," he says, "we would have developed departmentally optimized solutions that don't meet our highest-level business goals."

Getting involved with such committees is a way for IT leaders to ensure that they're driving technology in strategic ways, Berry says. In fact, he spends about 30% of his time working with cross-functional teams. The teams foster integrated thinking, and because the goal is to support high-level business goals, there's less argument over whose departmental concerns should take top priority. "That's where strategy is born," Berry says.

WHAT IT TAKES

Sonty's transition from project manager to IT leader 12 years ago marked his shift from a tactical mind-set to a strategic one. That meant broadening his thinking as well as the world in which he operated.

"IT at a strategic level involves many players, and you all have to work together and come up with a plan that you're all convinced is the best plan," he says.

For Sonty, that means taking into consideration the needs of 231 schools, 274,000 students and 19,000 teachers. "You need a strategy that covers all those areas," he says.

HOW TO Soak UP THE Skill

- Familiarize yourself with technical, process and operational details at your company. This will qualify you to discuss strategy.
- Consider resource constraints to be your best ally, since leaner budgets can help force strategic, as opposed to tactical, decisions.
- Read business and technology periodicals. They may help spur ideas that you can turn into action items.
- Don't overlook the thoughts that occur to you during your off-hours. The workday can quickly fill up with tactical tasks, so your most strategic ideas may come during your workout or commute.

Strategic thinkers also need to "reframe and reflect," Sonty says. Reframing means being able to switch your attention across multiple perspectives to generate new insights, he explains, while reflection requires you to process information, create knowledge from it and apply that knowledge.

These are the skills Sonty applied when creating a five-year strategic plan for Broward County, including a multiyear initiative called Project Knexus On Demand Workplace for Education. The goal of the project is to provide unified access to district information by pulling together the school system's applications, information and databases in a single Web portal. So far, Sonty's group has completed the first phase of the four-part project, enabling 2,000 administrators, principals and guidance counselors to access the information and applications they need to do their jobs. Later, teachers, parents and students will also be able to access information.

"The analogy I like to use is that to win in chess, you need to think a few steps ahead of your opponent," Sonty says. "We're investing significant dollars in technology, and you need to have a road map to see where you are and get a reality check on where you need to be."

So, how do you emerge into the strategic-thinking stratosphere? The good news is, strategic thinkers are made, not born, says David Baruch, senior vice president and CIO at Chicago-based Equity Office Properties Trust, one of the largest owners and managers of office buildings in the U.S. "For me, it developed over time," he says. "As the things I did became more complex, it became more important to put my planning efforts into carrying out strategic thoughts."

The first step is to build trust with your business partners, Baruch says. For instance, his group brainstormed with the national property operations group at Equity Office on how it could improve revenue and the level of service in its parking garage operations — the source of a large part of the company's revenue. As a result, IT built a system that is currently being rolled out in 12 cities that allows the company to bill more accurately, speed payment collection and offer customer self-service.

"We had to understand the business first and apply technology solutions to help move the business where they wanted to go," Baruch says. "That to me is strategic thinking and planning." ◆

Brandel is a Computerworld *contributing writer. Contact her at marybrandel@verizon.net.*

4

The Art of Diplomacy

The best way to develop diplomatic skills is by observing others.

BY MARY K. PRATT

AS EXECUTIVE sponsor of an upcoming merger, Debra Sleigh had to execute plans for bringing newly acquired offices into her California-based company.

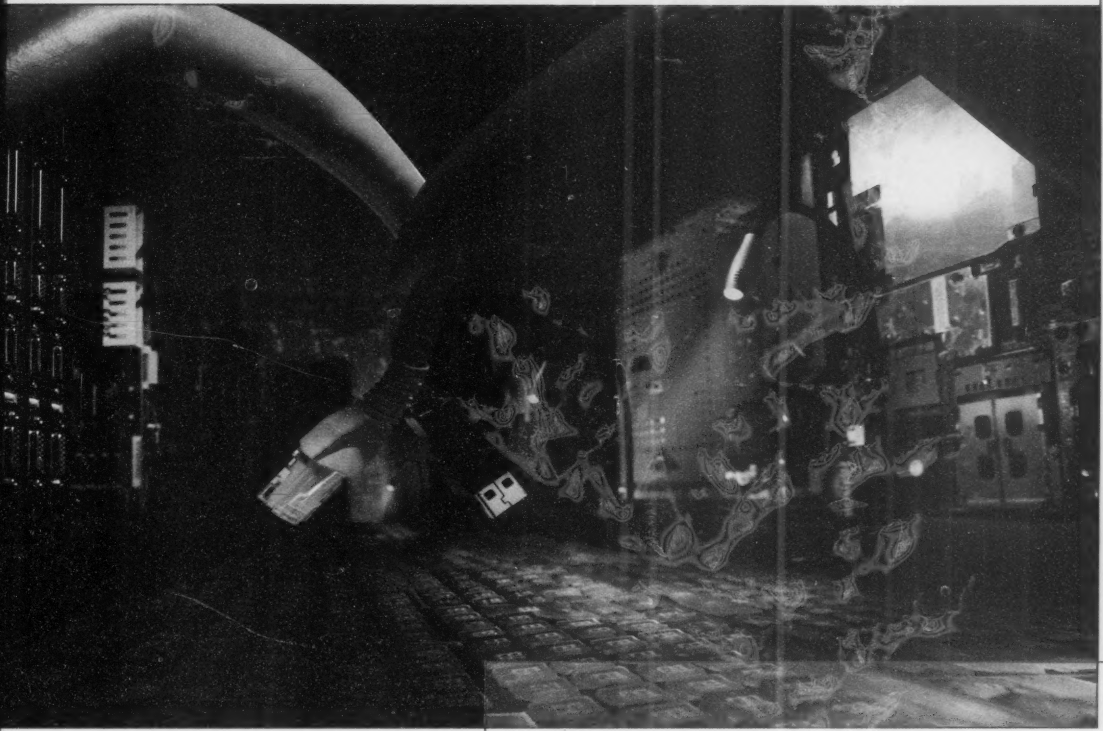
Sleigh's initial strategy was to go into those Midwest offices with her plan on how things would happen. But her mentor suggested that she step back and first consider the human aspect — who would report to whom, how often they would communicate and other factors.

She took that lesson in diplomacy to heart. Now Sleigh, vice president and CIO of clinical applications at Sutter Health, a Sacramento-based nonprofit organization of hospitals and physician groups, puts the art of diplomacy high on the list of skills needed by IT executives. "The true diplomat is the person who can make a situation amenable," she says. "It's an extraordinary intuitive skill, but you can develop it."

As the IT profession has continued to mature, IT workers have had to develop competencies in areas that have nothing to do with actual technology. They need leadership abilities, business acumen and, yes, even a knack for diplomacy.

But colleges generally don't offer Diplomacy 101, which means many IT people enter the workforce without understanding this age-old art. Not to worry. Even though today's

Continued on page 34



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A mentor taught Debra Sleigh, vice president and CIO of clinical applications at Sutter Health, a well-timed lesson in the art of diplomacy – and it's advice she continues to draw on today.

SETH JOEL

Continued from page 32

IT leaders see diplomacy as an essential skill, they admit that they, too, had to cultivate it.

"It's definitely attainable," says Bryan M. Sastokas, director of information services, strategy and architecture at Universal Service Administrative Co. in Washington. "But it's not something that will just happen on its own. You really have to plan it."

Top IT leaders say a mentor can be one of the best means of learning diplomacy. Those mentors can be within IT, in other departments or even outside the business.

Barry L. Shuler says his first mentor in diplomacy was his father, who would cite the old saying "You can catch more flies with honey than with vinegar."

"It doesn't mean you give up on your principles. It just means you have to project that you have the other person's best interests at heart," says Shuler, now senior vice president of IT strategy and chief technology officer at Marriott International Inc. in Bethesda, Md.

WHAT IT TAKES

Rick King, former CTO of Thomson Legal & Regulatory and now executive vice president and chief operating officer at Thomson North American Legal, has a great diplomat on staff. King says that person can sit down with anyone anywhere and break down issues to arrive at a solution that the technical people can execute and the business people are happy with.

"I've said to myself, 'How do I develop more people like him?' " King says. The answer: by sending other workers to watch how this diplomat listens carefully, influences and persuades.

But observation is only one way to learn, Sastokas says. He recommends books and courses on negotiation and coalition-building. He also recommends building up confidence in public speaking — another critical component of diplomacy.

Likewise, Ken Lehman, group director of shared services operations at Northrop Grumman Corp. in Los Angeles, recommends training in negotiations, communication and client relations — all of which help build a better understanding of other people.

"At the end of the day, I strongly believe diplomacy is all about people. It's really about learning and gaining their trust, putting yourself in their shoes and understanding their perspective," Lehman says.

It's important, though, to try out those newly acquired skills, says Dale W. Meyerrose, associate director of national intelligence and CIO at the Office of the Director of National Intelligence in Washington.

Meyerrose says IT workers can look for opportunities that will challenge their developing diplomacy skills. Corporate public relations people often run courses on related topics, such as how to run a press conference, that can sharpen skills in a safe environment. Business schools and online courses also offer role-playing opportunities and online simulations.

"A lot of people ignore the idea of practice," Meyerrose says, "but practice is another way to sharpen skills." ▸

Why IT'S CRUCIAL

THE NATURE OF TECHNOLOGY work today means diplomacy matters more now than it ever did, top IT leaders say. IT workers are expected to understand business, collaborate with colleagues from other departments, and negotiate budgets and delivery schedules with a wide array of business partners.

Moreover, they're often working with people from various countries, as they either serve global organizations or outsource some work overseas.

"All executives need diplomacy, but there is a certain characteristic about IT that demands it more than the other areas," says Rick King, former CTO of Thomson Legal & Regulatory and now chief operating officer at Thomson North American Legal.

This fact isn't lost on corporate executives and hiring managers, says Melissa Maffettone, branch manager and consultant at Robert Half Technology, a unit of staffing firm Robert Half International Inc. in Menlo Park, Calif.

Although companies don't specifically list "diplomacy" in job advertisements, Maffettone says they do use other language that clearly indicates they're looking for diplomatic skills in candidates at all levels in IT.

For example, companies are asking job candidates how they've navigated difficult predicaments and handled sensitive situations.

"What they're really looking for is diplomacy skills," Maffettone says. "We've been seeing it for a number of years, and it's becoming more and more critical every year."

– MARY K. PRATT

HOW TO Soak UP THE Skill

- Seek out mentors and role models who can provide insight into your diplomatic strengths and weaknesses.
- Develop empathy. The ability to understand others' viewpoints is a linchpin for good diplomacy.
- Read up on related topics, specifically sales and negotiations. Recommended authors include Napoleon Hill and Zig Ziglar. One suggested title is *Getting to Yes: Negotiating Agreement Without Giving In* (Penguin, 1991), by Roger Fisher, William L. Ury and Bruce Patton.
- Get out from behind your desk. "Diplomacy is the business of building relationships," says Dale W. Meyerrose, associate director of national intelligence and CIO at the Office of the Director of National Intelligence.

5

A Mind For Money

Finance is the unifying force that bridges departmental divides.

BY DREW ROBB

> YOU DON'T MAKE A DECISION TODAY WITHOUT UNDERSTANDING THE FINANCIAL IMPACT ON THE COMPANY.
>
> ANDY GEISSE,
> CIO, AT&T INC.

PHILL HOLLENBECK

WHEN it comes to finance, IT executives often find themselves feeling like *Star Trek*'s Dr. McCoy when they protest, "I'm an IT director, not an accountant!" But as companies work to integrate their information services and business processes, they have a greater need to count both beans and bytes.

"In the past, there were too many projects that IT, as an industry, worked on based on who screamed the loudest," says Andy Geisse, CIO at AT&T Inc. in San Antonio. "You don't make a decision today without understanding the financial impact on the company."

Geisse was a math and economics major in college, but he also took some accounting and finance courses. He then earned an MBA to better understand financial analysis. He says he uses these skills on a daily, if not an hourly, basis.

"Almost every aspect of my job includes using some financial skills," he says. "For example, when looking at which projects IT should pursue for the company, it involves a detailed analysis of return on investment, expense impacts and capital impacts for each project."

Finance also acts as a bridge between IT and the rest of the organization. "Finance is the common language between disciplines," says Geisse. "Marketing can speak in terms of what they need, and IT can speak in technical terms, but they can communicate in a common financial language to understand what is critical with the company."

HOW TO Soak UP THE Skill

- Spend time with finance staffers to learn their perspective.
- Use financial terms, rather than IT terms, as a means of communicating with others in the organization.
- Enroll in accounting classes.

WHAT IT TAKES

Being an IT manager requires more than obtaining a computer science degree or certification.

"An IT leader has to be adept at a number of skills in order to be successful," says David Saul, a senior vice president in State Street Corp.'s office of architecture in Quincy, Mass. He cites skills in areas such as project management, personnel, communications and finance, including forecasting, planning and budgeting.

But finance isn't commonly taught to those pursuing computer science degrees.

"Most IT managers, like myself, came from an engineering background and struggle with a budget the first time they have to complete one," says Saul.

So whether or not you're interested in finance, you have to learn it. "You don't need to like it, but you can learn it," says Andreas Wuchner, head of global IT security at Swiss pharmaceutical firm Novartis International

Continued on page 38

Why IT'S CRUCIAL

IF RODNEY DANGERFIELD couldn't get any respect, it was probably because he wasn't trained in finance.

"IT credibility was gained when we understood our costs, the drivers of those costs and how they benchmark in our industry," says Pete Walton, vice president and CIO at Hess Corp. "IT credibility is a key to becoming more than just a service provider to the business."

Andreas Wuchner, head of global IT security at Novartis International, concurs. "Finance is a very important building block for success. Never underestimate it," he says. "Transparency in financial questions creates trust and reflects leadership excellence."

– DREW ROBB

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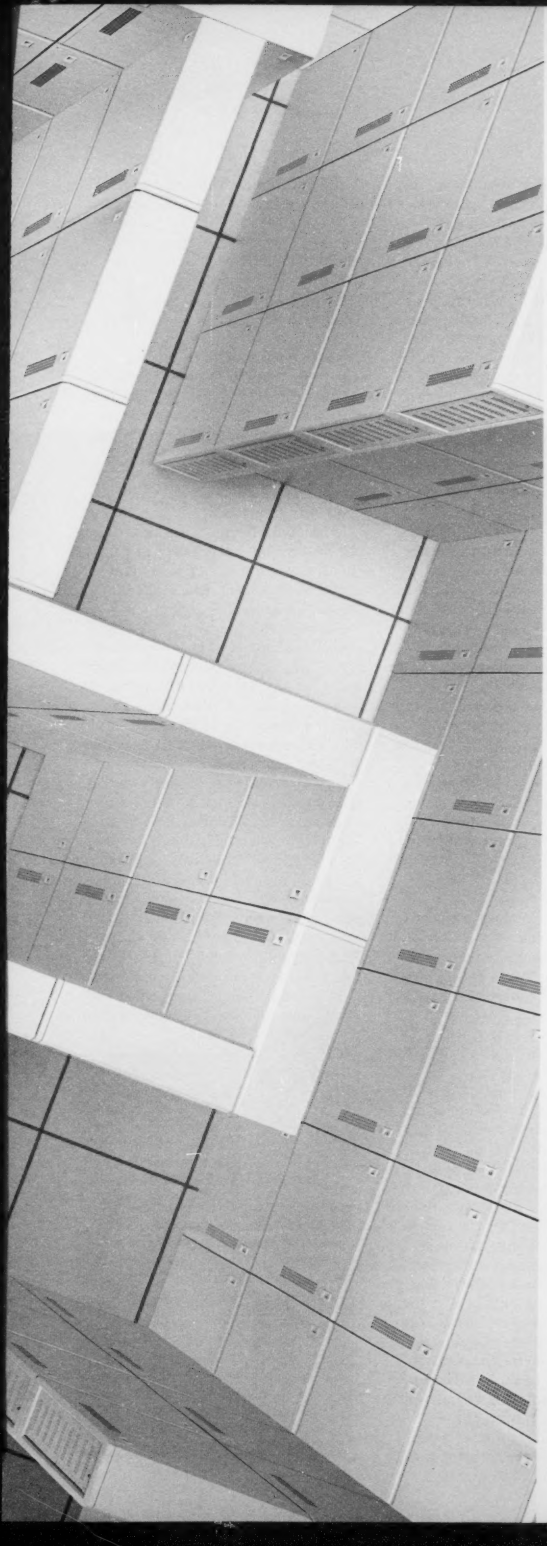

_INFRASTRUCTURE LOG

_DAY 45: These underutilized storage boxes have proliferated exponentially. Their inability to share capacity has doomed us. We're trapped in a maze of our own creation.

_DAY 47: I tried to give Gil a boost over this wall, but he pulled a hammie.

_DAY 48: I've taken back control with IBM System Storage™ SAN Volume Controller. It puts my entire storage universe into a simple, virtualized pool. And, unlike EMC, IBM has fourth-generation virtualization technology and over 2,000 customers. I am seeing results.

_Productivity is up. Utilization is up. I.T. guys lost in mazes of data is down.

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Continued from page 35

AG. "You can manage only what you can measure."

The required skills can be attained either formally or informally and, just like a certification, should be kept up to date with regular study.

"I am also constantly trying to improve these skills through formal education and by working with my financial counterpart to understand how he looks at particular projects and views the impact to the company," Geisse says.

Saul recommends taking a course in basic accounting or bookkeeping and getting on-the-job training. He worked as a bookkeeper for his local government when he was in college and says the experience has proved invaluable.

"There is a set of financial skills that go beyond simple bookkeeping and relate more to judgment," says Saul. "These include the ability to forecast and anticipate requirements."

Pete Walton, vice president and CIO at Hess Corp. in New York, says he learned quite a bit about finance when he ran a small manufacturing firm in the early 1980s. But he also advises getting assistance from others in the company.

> **MOST IT MANAGERS, LIKE MYSELF, CAME FROM AN ENGINEERING BACKGROUND AND STRUGGLE WITH A BUDGET THE FIRST TIME THEY HAVE TO COMPLETE ONE.**
>
> **DAVID SAUL,**
> SENIOR VICE PRESIDENT, STATE STREET CORP.'S OFFICE OF ARCHITECTURE

"There are people in your organization that understand this area well — love it, in fact," Walton says. "They are also likely to be willing to help you up the learning curve, so don't be bashful."

Ideally, an organization will have a formal program for training and mentoring that helps employees fill the gaps in their financial education. But if not, don't let that stop you.

"Everyone is responsible for their own career development," says Karen Hopkins, principal of The Hopkins Group LLC, a Dallas-based human resources consulting firm. "It's your career. You should be willing to invest some of your own resources in it." ▸

6

A Talent for Technology

In-depth knowledge of your systems helps build staff confidence.

BY MARY BRANDEL

WHEN Beach Clark joined the Georgia Aquarium in Atlanta as vice president of IT in July 2004, he had a lot to accomplish before the institution's grand opening 17 months later. One item was particularly challenging: getting an online ticket reservation system up and running well in advance of the aquarium opening its doors.

After several failed attempts with packaged software, Clark did what any good IT leader would do — he rolled up his sleeves and wrote out some specifications for how to integrate the aquarium's on-site ticketing system with its Web-based shopping cart package. He then enlisted the aquarium's Web development company, a few engineers from its ticketing system vendor and some consultants from Accenture Ltd. to build it. Today, 70% of the tickets the aquarium sells are purchased online, compared with an industry average of less than 10%, Clark says.

Although softer skills are getting lots of emphasis these days when it comes to defining leadership qualities, IT leaders also need to be able to dig into or at least understand the guts of computer systems.

"You wouldn't expect a law office or an accounting function to be headed up by someone who wasn't a lawyer or accountant, and I think the same is true of technology," says Clark, who worked for 11 years at the former Andersen Consulting and then at The Home Depot Inc., moving from chief network engineer to enterprise architect for application architecture. Whether to gain the respect of your staff, help keep your company ahead of its competitors or simply keep vendors and other providers honest, a technology grounding is essential, according to Clark and other Premier 100 IT Leaders.

WHAT IT TAKES

But that doesn't mean you literally have to be able to program; you just have to get past being what Barry Strasnick, CIO at CitiStreet LLC in Quincy, Mass., calls "buzzword-compliant." Strasnick's programming education was limited to the required computer courses he took at the Wharton School at the University of Pennsylvania. Today, Strasnick says he is considered a very technical CIO by his peers and the vendors he works with.

"You can be a technologically astute CIO without dwelling on the details of programming," he says. Strasnick's goal is to understand and have an intelligent opinion on anything his staff is discussing, aside from the actual code they're working on. And if he doesn't, he hits the Web. "If there's something I'm not comfortable with, I'll go online that evening or weekend, reading to improve my knowledge," he says.

Maintaining technology knowledge, Strasnick says, is the difference between an IT group that is reasonably managed and one that is world-class. "It's a global market now, and if you're a large player in a field and you're not delivering world-class technology, you're at a competitive disadvantage," he says.

And recognizing world-class technology isn't as easy as paying top dollar for the newest, shiniest systems that vendors want to sell you, Strasnick says. In fact, as they increasingly deal with a mix of outside technology providers and internal staff, it's even more critical for IT leaders to keep the wool from being pulled over their eyes.

Taking that approach is what led Strasnick's group this year to move one of its core applications from a high-end storage-area network system to a lower-end SAN that delivers better performance while saving the company $5 million. That meant understanding that the lower-end system's ability to spread the I/O load over multiple disk spindles provided significantly better performance than the combination of sophisticated algorithms and cache used by the higher-cost infrastructure.

"It's important for the IT management staff to have confidence in the technical expertise of their CIO, so they can feel confident proposing something other than the safest solution for a critical project," Strasnick says.

Not that it's easy for people with a technology bent to combine that mind-set with soft-side leadership skills, says William Pence, senior vice president and chief technology officer at online music subscription service Napster LLC. "It's rare to find someone with both hard and soft skills in sufficient depth," he says.

Pence himself holds a doctorate in engineering and has led what he calls a "hard-core" career in technology, having spent 10 years at IBM, in the R&D lab and the software group.

He credits his highly technical background with giving him a "sixth sense" for sorting through good and bad technology approaches. And it's important for him to maintain his technology edge, he says, since he's leading a group of talented programmers. "It's a cultural thing," Pence says. "If you lose the ability to do the work yourself, you're not viewed as an engineer anymore — you're seen as a con artist."

However, what helped pull him into a leadership role at IBM and continues to sustain his leadership ability is his passion to see technology applied to real market needs. "Nothing drives me crazier than good technology wasted," Pence says. "I try to stay deep down in the technology discussions and define the direction of our design issues, but what I love is to see stuff succeed from a business context." ▸

HOW TO Soak UP THE Skill

- Look for opportunities and assignments that give you hands-on experience with how technology works for the business.
- If you run into a technology concept you don't understand, take time during your nonwork hours to research and read up on the subject to get up to speed.
- Forget about keeping current on every new technology widget that comes along. Instead, get your head above the details and develop a metatechnology mind-set that incorporates meeting business objectives and providing the resources that your staff needs.

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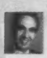

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Conference At-a-Glance *(subject to change)*

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SUNDAY, MARCH 4, 2007 — **Registration Open: 10:00am – 7:30pm**

Noon – 5:00pm	**Pre-conference Golf Outing** *Sponsored by* FUJITSU
7:00pm – 9:00pm	**Pre-conference Welcome Reception**

MONDAY, MARCH 5, 2007 — **Registration Open: 7:00am – 6:30pm**

7:00am – 8:00am	**Breakfast**
8:00am – 8:15am	**Welcome and Opening Remarks** Julia King, Executive Editor, Events and National Correspondent, Computerworld Don Tennant, Vice President and Editor in Chief, Computerworld Patrick McGovern, Chairman of the Board, International Data Group
8:15am – 9:00am	**Opening Visionary Address** H. James Dallas, Senior Vice President and Chief Information Officer, Medtronic, Inc.
9:00am – 9:45am	**Featured Presentation** Bruce Goodman, Senior Vice President and Chief Service and Information Officer, Humana Inc.
9:45am – 10:00 am	**Networking Break**
10:00am – 10:30am	**Featured Presentation** Donna Seymour, Chief Information Officer/Special Assistant to the Associate Administrator for Administration, U.S. Maritime Administration
10:40am – 12:30pm	**Concurrent IT User Case Studies**
12:30pm – 2:00pm	**Lunch in the Networking Lounge**
2:00pm – 2:30pm	**Featured Presentation**

Conference At-a-Glance *(continued)*

MONDAY, MARCH 5, 2007 *(continued)* **Registration Open: 7:00am – 6:30pm**

2:30pm – 3:15pm	**Panel Discussion: Beyond the Crystal Ball: Real-Life Strategies for Creating a Flexible, Future-Proof IT Infrastructure** Panelists: Rick King, Executive Vice President and Chief Operations Officer, Thomson North American Legal; Janice Malaszenko, Vice President and Chief Technology Officer, Information Management, Xerox Corp.; William Pence, Senior Vice President and Chief Technology Officer, Napster LLC; Barry Shuler, Senior Vice President, IT Strategy and Chief Technology Officer, Marriott International, Inc.
3:15pm – 3:30pm	**Featured Presentation** Steve Ellis, Executive Vice President, Wholesale Services Group, Wells Fargo
3:30pm – 4:30pm	**Panel Discussion: Stepping Up To The Plate: Defining Moments in IT Leadership** Moderator: Don Tennant, Vice President and Editor in Chief, Computerworld Panelists: Dale Frantz, Chief Information Officer, Auto Warehousing Co.; Louis Gutierrez, Principal, Exeter Group, former Chief Information Officer, Commonwealth of Massachusetts; J. Clark Kelso, Chief Information Officer, State of California; Darryl Lemecha, Chief Information Officer and Senior Vice President of Shared Services, ChoicePoint
4:30pm – 5:25pm	**Closing Address** Filippo Passerini, Global Services Officer and Chief Information Officer, The Procter & Gamble Co.

TUESDAY, MARCH 6, 2007 **Registration Open: 7:30am – 5:00pm**

7:00am – 8:00am	**Breakfast and Focused Networking**
8:10am – 8:15am	**Opening Remarks** Julia King, Executive Editor, Events and National Correspondent, Computerworld
8:15am – 9:00am	**Opening Visionary Address** André Mendes, Vice President and Chief Information Officer, Special Olympics International
9:00am – 9:45am	**Featured Presentation** V. James Onalfo, Deputy Commissioner and Chief Information Officer, New York City Police Department
9:45am – 10:00am	**Networking Break**
10:00am – 10:30am	**Featured Presentation**
10:40am – 12:30pm	**Concurrent Sessions/IT End User Case Studies**
12:30pm – 2:00pm	**Lunch in the Networking Lounge**
2:00pm – 2:45pm	**Panel Discussion: Developing Talent As If Your Business Depended On It** Moderator: Thornton May, Futurist and Computerworld Columnist Panelists: Stephen Olive, IDS Information Solutions Vice President, Chief Information Officer, Raytheon; Eileen Gabriel, Senior Vice President and Chief Information Officer, Dick's Sporting Goods
2:45pm – 3:30pm	**Featured Presentation** Lynn Vogel, Ph.D., Vice President and Chief Information Officer, University of Texas M.D. Anderson Cancer Center
3:30pm – 3:45pm	**Networking Break**
3:45pm – 4:30 pm	**Featured Presentation**
4:30pm – 5:25pm	**Closing Visionary Address** Geoffrey Moore, Bestselling Author of *Dealing with Darwin*, *Crossing the Chasm*, and *Inside the Tornado*; Managing Director, TCG Advisors and Venture Partner, Mohr Davidow Ventures
7:30pm – 9:30pm	**Gala Evening, "Best in Class" Awards and Honoree Recognition, Entertainment**

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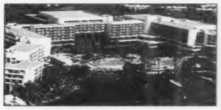

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- ☐ Authorize/approve purchase
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- ☐ Specify features/technical requirements
- ☐ Set budget for expenditures
- ☐ Determine need to purchase
- ☐ Create IT strategy
- ☐ None of the above

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- ☐ 5,000 - 9,999
- ☐ 1,000 - 4,999
- ☐ 500 - 999
- ☐ 100 - 499
- ☐ 50 - 99
- ☐ Less than 50

What is your organization's annual IT/IS budget for all IT/IS products?
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- ☐ $100 Million - $499.9 Million
- ☐ $50 Million - $99.9 Million
- ☐ $10 Million - $49.9 Million
- ☐ $1 Million - $9.9 Million
- ☐ $500,000 to $999,999
- ☐ $250,000 to $499,999
- ☐ $100,000 to $249,999
- ☐ Less than $100,000
- ☐ None of the above

What is the estimated annual revenue of your entire organization?
- ☐ $10 Billion +
- ☐ $1 Billion - $9.9 Billion
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What is your organization's MOST mission critical development/implementation project this year?
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- ☐ Mobile & Wireless
- ☐ Enterprise Infrastructure/Data Center Buildout/Consolidation
- ☐ Network Infrastructure/Storage
- ☐ Security
- ☐ Application Development and Integration (Web services/EAI)
- ☐ Compliance

What is your organization's SECOND-MOST mission critical development/ implementation project this year?
- ☐ Business Intelligence/ BPM/Customer Analytics
- ☐ Data Management
- ☐ Mobile & Wireless
- ☐ Enterprise Infrastructure/Data Center Buildout/Consolidation
- ☐ Network Infrastructure/Storage
- ☐ Security
- ☐ Application Development and Integration (Web services/EAI)
- ☐ Compliance

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7

A Knowledge Of Industry

A deep understanding of their industries helps these IT leaders be business pioneers.

BY MARY BRANDEL

WILLIAM PENCE might be the first to admit that he's an extreme example of an IT leader who must keep up with the vertigo-inducing changes of his industry. In fact, throughout his three-year tenure at online music subscription service Napster LLC, Pence has had to not only keep up with the music download industry, but in some cases help create it.

In the early days, that meant grasping concepts like digital rights management and royalty administration and translating them into software code. Today, it means pushing things like mobile subscription services, deeper recommendation capabilities and integration with satellite radio partners.

"When we built the first legal Napster platform, there was no course you could take in school to build a system like that," says Pence, who is senior vice president and chief technology officer at Napster. "You just had to parse the problem down to its basic pieces and then find the simplest and most reliable way to build that into software."

And that requires a deep dive into the guts of how the music download industry works. "The rules for how we can or cannot use content are so Byzantine," Pence says. "The number of rights holders that have to get paid and the rules that differ by territory — all that has to get coded into the software."

WHAT IT TAKES

But while Pence might be a far-out example of an IT leader who also has to be an industry expert, he says the increasingly interdependent relationship of technology and competitiveness means that anyone who wants to lead a team of technologists needs to be acutely aware of industry needs.

Take Danny Siegel, director of data warehousing and business intelligence at Pfizer Inc. in New York. In the past two years, the pharmaceutical giant has made numerous acquisitions, which isn't unusual for a big company trying to continually develop a pipeline of new drugs. Integrating all those acquisitions in a timely manner is a major undertaking, but because Siegel has worked in the industry since 2001, he's equipped to expedite the data and systems integration process.

"Understanding the business really helps you understand acutely which data needs to stay; what needs to be accessible by the attorneys, the manufacturing guys and the marketing folks; and what's unique to the acquired entity," he says. "It makes the depth of analysis a lot lighter."

Siegel's industry knowledge also helps his IT team build more effective systems. For instance, earlier this year, his group was asked to embark on a project to deliver some highly summarized data and some deeply detailed data to existing process-based applications. "Because I have deep process knowledge," Siegel says, "I challenged their requirements and the status-quo thinking in order to simplify the technology components and influence some changes in the processes."

In other words, because he knew there was some flexibility in how he approached the problem, Siegel was free to switch from the Web service-based approach that the team first tried — but found too slow because of the large size of the returned data sets — to a service-oriented architecture approach that accomplished the requirements without the processing delay.

Industry expertise also helps IT leaders thoroughly understand a project's implications, including the mine fields they might encounter. That's what Barbara Dolhansky found out when, as associate vice president of computer services at Temple University in Philadelphia, she led a project to replace Social Security numbers with a new nine-digit key structure to identify university students, faculty and staff. The project had its technology challenges, but it could have also resulted in broad political and change management issues if Dolhansky hadn't been keenly aware of all the constituents who would be affected by the change.

"What we were doing was changing the entire way Temple did business," she says. "We had to understand all the constituent groups and include them in making key decisions."

Beyond technology considerations, the project entailed redesigning 11 styles of new picture ID cards, taking into consideration requirements of the Health Insurance Portability and Accountability Act; distributing the cards to more than 50,000 people; modifying the ID card system to print the new designs; and providing a secure, Web-based mechanism for those outside of IT to convert data in their own systems to the new format. The only way to foresee all the possible repercussions was to understand how universities operate, Dolhansky points out. "It wasn't just a technology project; it was also a business project," she says.

And having the industry knowledge is just as important as passing these insights along to your staff, Pence says. "I believe engineers appreciate business pressures, and they respond when they're brought into the discussion as opposed to being left to juggle development work without the business context," he says.

"I don't think any IT leader can lead in a vacuum anymore," Dolhansky says. "If you don't know the business issues, you're not able to do your job." ▶

HOW TO Soak UP THE Skill

▪ Make a point of talking with decision-makers in your company or their direct reports on a quarterly basis. Find out which questions they're having a hard time getting answered and what problems they face.

▪ Read industry magazines to learn about customers' changing demands.

▪ Network with your peers at places like industry conferences to discover upcoming industry trends or validate your own challenges.

▪ Seek out client service roles to discover customer pain points.

▪ Visit with companies in your area that face similar issues or are implementing similar systems to share their lessons learned.

TOP PRIORITIES

IT leaders identified the most critical technologies that will receive funding priority at their companies in 2007:

1. Application development and other software
2. Data management and business intelligence
3. Security tools
4. IT and network infrastructure
5. E-business software
6. Disaster recovery and continuity planning
7. Content management tools, including intranets, extranets and portals
8. Wireless and mobile technology
9. Storage networks

PIPELINE PROJECTS

Premier 100 IT Leaders say data management and IT governance projects are at the top of their 2007 to-do lists. Other initiatives on their lists include the following:

1. Data management, including data warehousing, business intelligence and data centers
2. IT governance, including strategy and planning
3. Systems integration, consolidation and upgrades
4. Vertical industry-specific projects
5. Infrastructure and systems management
6. ERP
7. Security initiatives
8. Mobile and wireless technologies, including RFID
9. On-demand computing and virtualization
10. CRM

STICKING POINTS

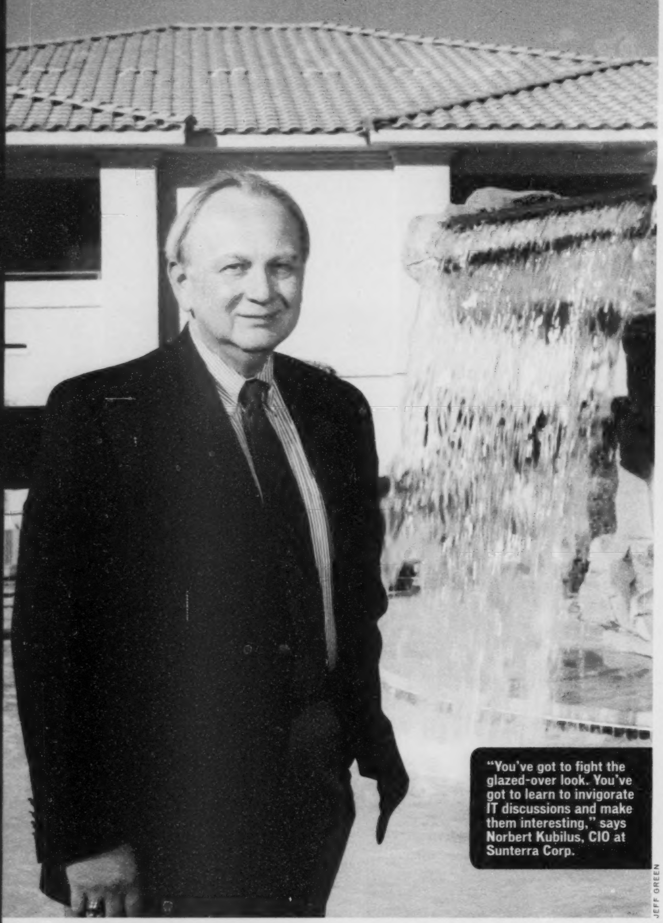
IT leaders identified the top challenges they're facing right now:

1. Cost cuts and tight budgets
2. Staffing issues, such as recruitment, skills shortages and staff development
3. Change management issues, including cultural change
4. Project prioritization, strategy and project management
5. Balancing the needs of business with increasing demands on IT
6. Regulatory compliance
7. Systems or infrastructure upgrades or consolidations
8. Integrating systems
9. Strategic planning
10. Staying innovative, agile and flexible

7 Common Obstacles

It's not an easy road, even for the high-powered IT leader. Here are the top seven issues that vex them daily.

BY JENNIFER McADAMS



"You've got to fight the glazed-over look. You've got to learn to invigorate IT discussions and make them interesting," says Norbert Kubilus, CIO at Sunterra Corp.

JEFF GREEN

STAFFING SHORTAGES constantly weigh on the minds of IT leaders, who walk tightropes to synchronize the precious resources and manpower available in their own shops with the priorities and problems flung across a variety of business units within the company.

For the IT executive charged with both fiscal restraint and technical innovation, the challenges are many. However, *Computerworld*'s Premier 100 IT Leaders homed in on seven key issues that create headaches for many CIOs.

Skills and staffing shortages top the list. Not far behind is the nightmarish situation of executive managers withholding support for high-profile technology projects or setting unrealistic deadlines and expectations. Add to this list of common woes insufficient budgets and the problems that stem from miscommunication and threaten a possible breakdown in business-IT alignment. And if these internal struggles aren't enough, IT leaders must also hustle to keep pace with technology.

Wise is the CIO who isn't afraid to tackle these and other problems head-on and does so with an air of forthrightness, says Don Riley, CIO at Mohawk Industries Inc.

"The more transparent you are, the more people will trust your department," he says. "By transparent, I mean proving that you have nothing to hide in terms of the way your team is performing, whether you are on or off budget and what resources you have available. If you hold back, they are only going to find out anyway."

1 SKILLS AND STAFFING SHORTAGES

CIOs must ensure that they have the right expertise in the IT trenches — not an easy task, particularly for those at companies with aging infrastructures, notes Marc Cecere, an analyst at Forrester Research Inc.

"Large companies in particular have many old systems," he says. "The expertise for these older systems is disappearing rapidly, and vendors are dropping support. It is not simply a matter of finding Cobol programmers. More importantly, companies must keep the expertise they have for specific applications, especially those that have been customized over the last couple of decades."

Along with keeping seasoned employees happy, CIOs must keep a constant eye on the newest crop of IT professionals and groom them through mentoring and training initiatives.

"We have a scorecard, or index, that we have created around employee development that includes about five or six elements," says Daniel Hill, senior vice president and CIO at Chicago-based Exelon Corp., one of the nation's largest electric companies. "Mentoring and training programs are a big part of that. We also use targets to measure the performance of how well our IT employees are aligned with particular engagements."

Working furiously to retain staffers and promote from within still may not be enough, and IT leaders must be prepared to look elsewhere.

"Create relationships with a couple of local firms or offshore companies and negotiate rates long before you need people. This way, you will have access to temporary or long-term resources," advises Donna Slyster, senior vice president and CIO at CHEP, an Orlando-based supplier of industrial pallets and pooling services that many large food, chemical and automotive corporations use in their supply chains.

2 INSUFFICIENT BACKING FROM MANAGEMENT

CIOs must also frequently fight for the extra resources and executive support that high-profile initiatives need to succeed. The first step to winning influential friends is learning to speak their language. "Be sure to communicate in

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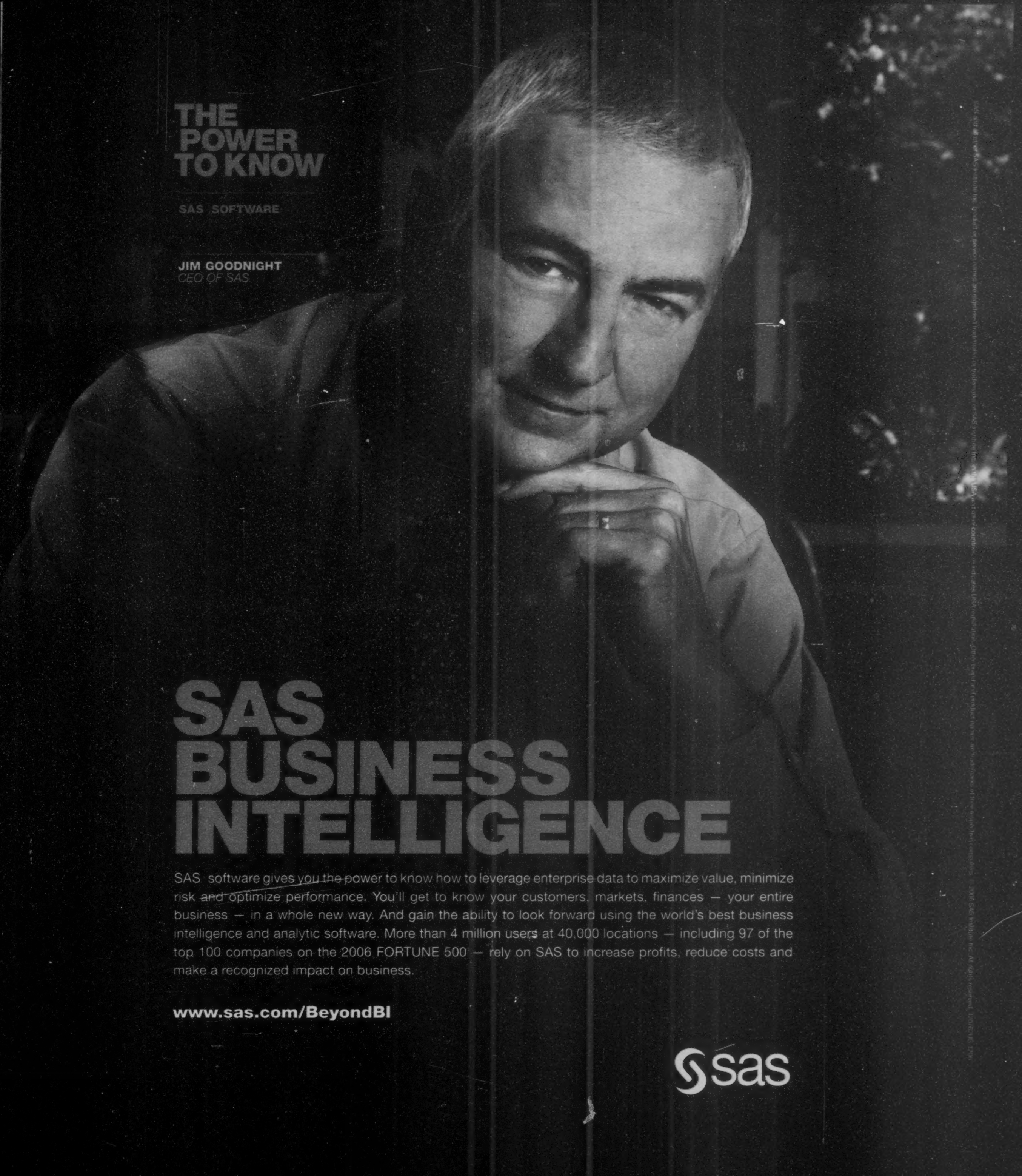

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Continued from page 40

business terms, not technology terms," says Slyster.

Some CIOs take this a step further and incorporate dramatic analogies to prove the worth of IT projects on the table. "You've got to fight the glazed-over look," quips Norbert Kubilus, CIO at Sunterra Corp. in North Las Vegas. "You've got to learn to invigorate IT discussions and make them interesting, even for those executives that have been sitting on their butts for six to nine hours in a meeting." Sunterra is an operator of vacation ownership resorts, with about 100 branded or affiliated resorts and more than 318,000 owners.

In one instance, Kubilus likened a move to a Linux-based platform to building a helicopter, knowing he would captivate his company's CEO, who is an avid pilot. "I explained to him that when we were buying Sun servers, it was like going to a helicopter dealer and buying a complete helicopter, but that now we were going to Boeing and buying a helicopter with no avionics. I was thus able to explain to him how this would benefit the company in the long run," he recalls.

Advice on the House

- Spend your IT budget wisely, almost as if you had to fund projects personally.
- Identify early those skills your staff is missing and quickly forge ties with local placement agencies or explore offshore options.
- Try to counter risk aversion in your organization, but know when the company simply isn't ready for a major move and have the courage to back off.

Using role-playing and other methods to draw executive decision-makers out of their own worlds can also prove effective. For example, IT officials at Wells Fargo & Co. were poised to build a heavy-duty portal that the company's business customers would use regularly. Strong executive buy-in was a must, notes Steve Ellis, executive vice president and head of wholesale services at the San Francisco-based financial services behemoth.

"We do a lot of 'day in the life' scenarios of our customers here," says Ellis. "For instance, we asked our executives to imagine that they are a CFO of one of our customer companies. This person wakes up in the morning when the alarm goes off, does this or that, and then turns to our portal because it provides a simpler work environment for this individual. Using this exercise, we were really able to breathe life into a lot of what we were trying to do."

3 INSUFFICIENT BUDGETS

Brutal honesty is a must when it comes to fiscal issues, and that directness needs to start at the very beginning of the budgeting process, says Kubilus.

Avoid overcommitting, and drive home the consequences of underfunding, Kubilus says. "You may not get what you ask for," he says. "If this is the case, tell senior management what they will be giving up if you don't get X or Y. Put it in terms of customer service, IT response time or the time it will take to get a project out the door."

If decision-makers are still unwilling to add to IT coffers, stick to the limitations spelled out in the budgeting process. "In life, there are tough choices. You may not like the budget you end up with, but it is only insufficient if you overcommit," says Mohawk's Riley.

At the same time, accountability is crucial. "Spend money as though it were coming out of your own personal checkbook," says CHEP's Slyster.

She stresses the need for a reality check on costs. "All projects should be evaluated on the return the business will get. After the project is complete, confirmation is needed to ensure the benefits were achieved," she says.

4 BUSINESS-IT ALIGNMENT ISSUES

It's up to CIOs to be well versed in both business and technology to avoid the problem of IT shops and business units failing to understand each other.

"Often, technology leaders get their positions based on technical abilities. However, they must be able to understand business to be effective," observes Kubilus. He says he was determined not to let any walls go up between his staff and Sunterra's operational departments when the company embarked on an ambitious plan to create a new resort information management system, known as RIMS II.

"We listened to the business units during the entire software development life cycle," Kubilus says. Tight alignment yielded a system that serves several Sunterra audiences. Minus this communication, RIMS II likely would not enjoy the usage it does today. "The worst-case scenario would have been us delivering a database and front-end tools that never got used," says Kubilus.

5 PACE OF TECHNOLOGICAL CHANGE

As if orchestrating efforts between IT and various business units weren't enough, IT leaders are pressured to keep constant pace with technological change.

Often, this will take more than hefty fiscal investments in internal research-and-development efforts. "You've got to allow your staff to put some time and thought behind R&D," says Kubilus. For this reason, he rejiggered the job descriptions of his direct reports so that a percentage of their time would be dedicated to research and development.

Monitoring changes on the technology landscape is crucial, but some tech leaders complain that lately change has not come fast enough. "I agree this used to be an issue, but I feel technology has slowed down since 2001," Slyster says. "I am a bit frustrated and find myself pushing our technology partners to advance more quickly."

6 LACK OF BUSINESS UNDERSTANDING INSIDE IT

While failure to educate others on exactly what IT departments do and how technology can help is unwise, neglecting opportunities to further the IT staff's understanding of other departments borders on recklessness.

"IT folks have become the de facto 'know-alls' in most businesses, because they have the opportunity to observe and implement business processes across the company," says Ananth Krishnan, vice president and chief technology officer at Tata Consultancy Services Ltd., a Mumbai, India-based IT consulting company. "Width of business understanding is key to successful IT leadership from an internal customer perspective. The rest is implementation."

Again, role-playing can be a useful educational tool. "I think it is important for people in the IT department to spend a day in the life of those people working in different parts of the organization," says Mohawk's Riley. "We actually have them sit in our centers and take customer orders."

Time spent in a call center adds perspective for an IT staffer, especially one who has prescribed an unworkable solution to a customer service agent. "It's easy to tell this user to just hit this button every time you have a problem. Once they understand that they have to hit that same button 10,000 times a day, they understand that the solution is inappropriate," Riley says.

Exelon IT officials also nudge technology workers into the trenches. Exelon's energy delivery organizations have endured major changes because of deregulation of the energy sector. "The impact of deregulation and new regulatory requirements have changed the way these business units operate, and they need IT's help to navigate those changes," says Hill.

7 LACK OF TECHNOLOGY UNDERSTANDING OUTSIDE IT

Maintaining a competent staff either by relying exclusively on internal employees or by blending in outside talent is only half the battle. Corporate IT leaders must then rally their troops in constant campaigns to educate business units on the value IT can bring to mission-critical initiatives.

Far too many technology leaders fall down in this area and have no one but themselves to blame, according to Forrester's Cecere. "Lack of technology understanding outside of IT is self-inflicted. I've seen very few IT shops educate business people in a disciplined way. Large shop managers are generally pretty sophisticated and realize the importance of educating business people, but it's often third on the list of priorities and difficult to implement, given resource demands," he says.

Effective efforts to illuminate business units on the role and benefit of IT might include formal meetings or more casual get-to-know-you sessions. "We conduct executive briefings on various technical issues," Kubilus says. "Sometimes these may be pure IT briefings on a particular technology or an update on a major project."

A true juggling act is required of today's CIOs. The most effective IT leaders will tread lightly around common land mines that are just waiting to keep them from reaching their performance goals. ▸

McAdams is a freelance writer in Vienna, Va. Contact her at JMTechWriter@aol.com.

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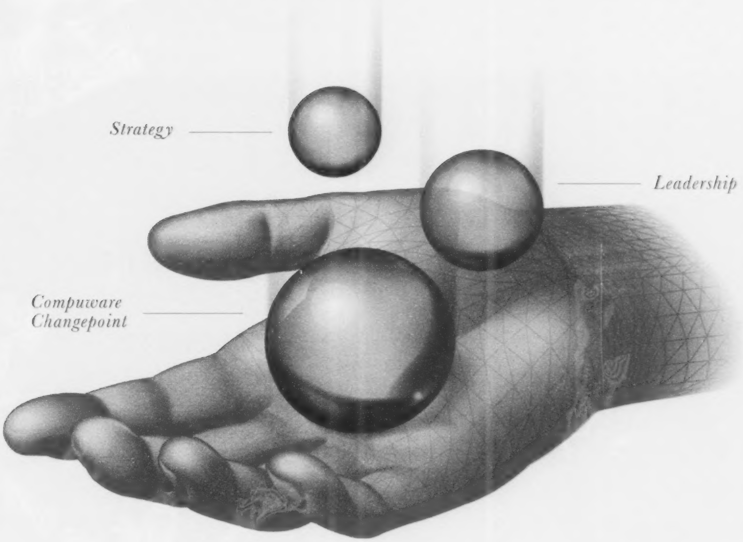

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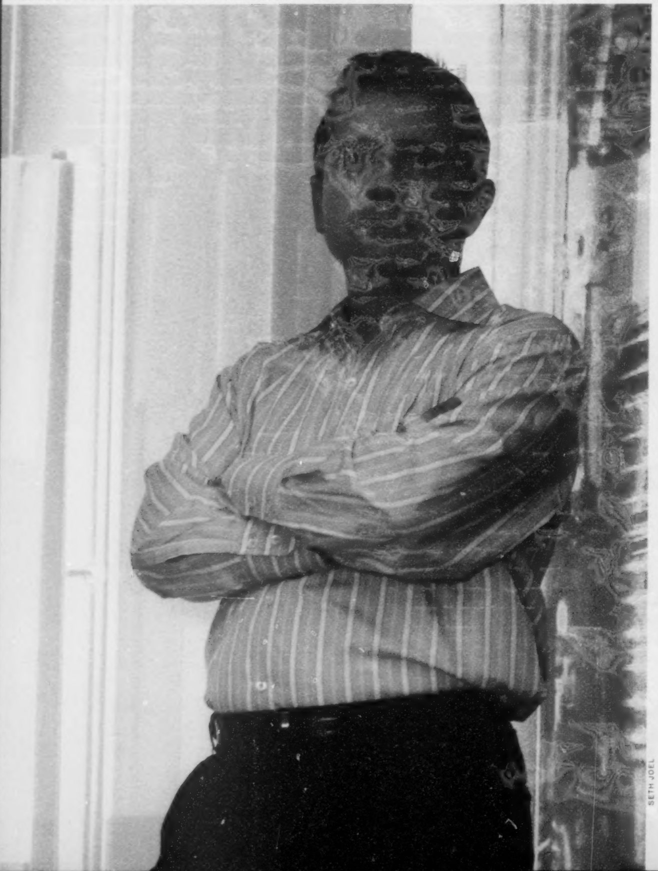

SETH JOEL

PATRICK BENNETT:

Staying Nimble in A Rapidly Changing Field

BY MONICA SAMBATARO

PATRICK BENNETT got his first big break in Hollywood a decade ago, when he answered an ad from a multimedia start-up looking for someone with "a new vision for technology." Bennett got the job and soon was directing software projects for major studios like MGM, Paramount and Warner Brothers.

Now, as executive director of business applications at E! Entertainment Television Inc. in Los Angeles, Bennett, 49, is turning that "new vision" into reality.

"There's been an explosive change," he says. "Everything is transforming, and no one knows where it will end up."

With the rapid expansion of new media, the need to innovate and quickly respond to market demand is greater than ever, Bennett explains. "You have

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The Honorees

PREMIER 100 IT LEADERS 2007

- **DENNIS R. AEBERSOLD**, vice president and CIO, University of Oklahoma, Norman, Okla.
- **LT. COL. BENJAMIN P. ALLEGRETTI**, CIO, U.S. Marine Corps Systems Command, Quantico, Va.
- **DAVID B. BARUCH**, senior vice president and CIO, Equity Office Properties Trust, Chicago
- **PATRICK S. BENNETT**, executive director of business applications, E! Entertainment Television Inc., Los Angeles (see story at left)
- **CRAIG J. BERRY**, senior vice president of IT and CIO, UGS Corp., Plano, Texas
- **VERNON M. BETTENCOURT JR.**, deputy CIO/G6, U.S. Army, Washington
- **TONY B. BISHOP**, senior vice president, chief product strategist and head of product management, Wachovia Corporate Investment Bank, Charlotte, N.C.

CONTINUED ON PAGE 50

Leader Do-Over

"Not finishing the Certified Network Engineer program, at three credits short. In hindsight, I would have forced the schedule of those courses and made up deliverable commitments during weekend time to ensure my day job was done.

TONY B. BISHOP [illegible]

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Leader Do-Over

Outsourcing front-end Web development to the Ukraine to save $18 per hour. If I had to do it over, I would work with a local team from the beginning.

PATRICK BENNETT, EXECUTIVE DIRECTOR OF BUSINESS APPLICATIONS, E! ENTERTAINMENT TELEVISION INC.

Continued from page 44

to be continually learning and changing, because nothing is standing still," he says. "You have to expand beyond the walls of traditional IT."

Tearing down walls is something Bennett has been doing since the start of his career. Bennett says he "fell into technology" when he took a job as a business/technology liaison after graduating from Cornell University with a degree in English literature. Moving between corporate management and IT helped him develop a broad perspective, something that's critical for IT leaders today, he says.

Currently enrolled in an MBA program, Bennett says he's looking to get even more involved in the business side of the entertainment industry. And he's also trying his hand at more creative endeavors. For instance, Bennett wrote a screenplay called *Window* and persuaded the television show *Scrubs* to loan its set for filming. The short drama, starring Lou Gossett Jr., recently won an award at the Heartland Film Festival in Indianapolis.

Moving beyond the realm of IT, both inside and outside the company, provides unique opportunities to learn from other people, Bennett emphasizes. One of his mentors is Jeff Mayzurk, senior vice president of technology at E! "He has passion around innovation," Bennett says. "He continues to push me."

He adds that his father, Oscar Bennett, a retired chief warrant officer in the U.S. Army Special Forces, has also been a role model. "Being an Army brat, I've been exposed to all levels of leaders and models of the way to lead," he notes.

When it comes to leadership style, Bennett's approach is to let his team "do its thing," stepping in when guidance is needed at key points, according to David Johnson, director of software development at E! "He gets the big picture and has the keen sense of knowing when he's needed, like an invisible guiding hand," Johnson says.

But sometimes, more than one take is needed to get it right.

For example, Bennett says E!'s digital asset information system, known as Daisy, started out several years ago as a "monolithic, multiyear project" designed to streamline content management and production. But after a great deal of time and money was spent on the system, "the vision proved too grand to do in one project," Bennett says.

Instead of scrapping the initiative altogether, the technology group broke it down into functional blocks and began building components in increments. Today, the system is under continual development and provides state-of-the-art functionality while reducing costs through improved efficiencies.

The lesson learned, Bennett says, is that "even if you have a massive failure, take what you can from it and persevere." He says he asks all prospective hires about project failures, because "if you haven't failed, you haven't been seasoned as a leader." ▸

ADVICE ON THE HOUSE

You need to understand the business just as much as the technology. Now, there is no separation.

– PATRICK BENNETT

DICK DANIELS:

Building A Career By Building Bridges

BY EUGENE A. DEMAÎTRE

Dick Daniels, 52, divisional CIO at Capital One Auto Finance in Plano, Texas, has worked at the lender subsidiary of Capital One Financial Corp. for two and a half years, but his IT career dates back to 1971. "Computer operator and junior programmer were the titles back then," he says. "The head of data processing evolved into MIS director and then into CIO. I really fell in love with this field and set out to learn all I could."

Daniels says he learned by moving around within IT and then applied his knowledge across areas. "My goal was not to move up but to explore and enjoy every aspect of the profession, from the data center to telecommunications, telecom to application programming, and applications to tech support," he recalls. "I found myself building bridges across disciplines and communicating with people across tactical as well as strategic elements."

Looking back, it's that method that helped him build a successful IT career. However, there are a few things he might have done differently. "At one time, I had a very senior guy tap me on the shoulder to take on more responsibility," says Daniels. "I turned him down because I felt I wasn't finished with learning. Fortunately, he came back a year later."

Daniels observes that mentors and non-IT experiences were crucial to his development. The late Doris Bencsik, a former executive at Datapoint Corp., "saw some things in me I didn't see in myself. She gave me opportunities and a chance to grow," Daniels says.

"From outside IT, I learned to give back to the community," he adds. "It helps with the leadership role in IT to learn to develop, to hear and support people."

Daniels is a member of the Capital One Auto Finance Diversity Council and serves as a sponsor for its mentoring program. He is also a board member at the Texas Diversity Council, a supporter of the Boys & Girls Clubs of America chapter in Collin County and a supporter of the United Way of America.

Daniels has tried to apply lessons about recognizing the potential of others within his own staff.

For example, Scott Lutz, vice president of IT at Capital One Auto Finance, started on the application development side. "I've had opportunities to go into other parts of the business over the years, including loan servicing and the data warehouse," he says.

"Shifting gears from being a technologist to a manager is difficult, but Capital One develops people with the management aspects," says Lutz. "Dick says management is a skill to be learned and practiced, like any other skill – applications [development] or accounting."

Lutz adds that Daniels nurtures his staffers while also holding them accountable. "Dick provides a forum for managers to get their jobs done and not look behind their backs in case they fail," says Lutz. If a project wasn't successful, he adds, "Dick as a leader would completely understand and ask that we learn from that mistake."

Daniels also says IT leaders should learn from one another. "Affiliation with other executives is very important – there are similar problems across companies," he says. "Leadership can be a lonely place."

Despite his success, Daniels hasn't rested on his laurels. He says he hopes to "further IT within the corporate world [and] make it even more engaged with business operations." Daniels adds that he sees the CIO role becoming more integrated with the chief operating officer's as technology and operational functions become intertwined. ▸

ADVICE ON THE HOUSE

DANIELS

First, enjoy every aspect of your career and the IT profession. Second, have a vision for where you want to go and go for it. Care about your people on the way. Third, reward what you value. If you want teamwork, reward teamwork. If you want strong individuals, reward strong individuals. Align incentives with values and behaviors.

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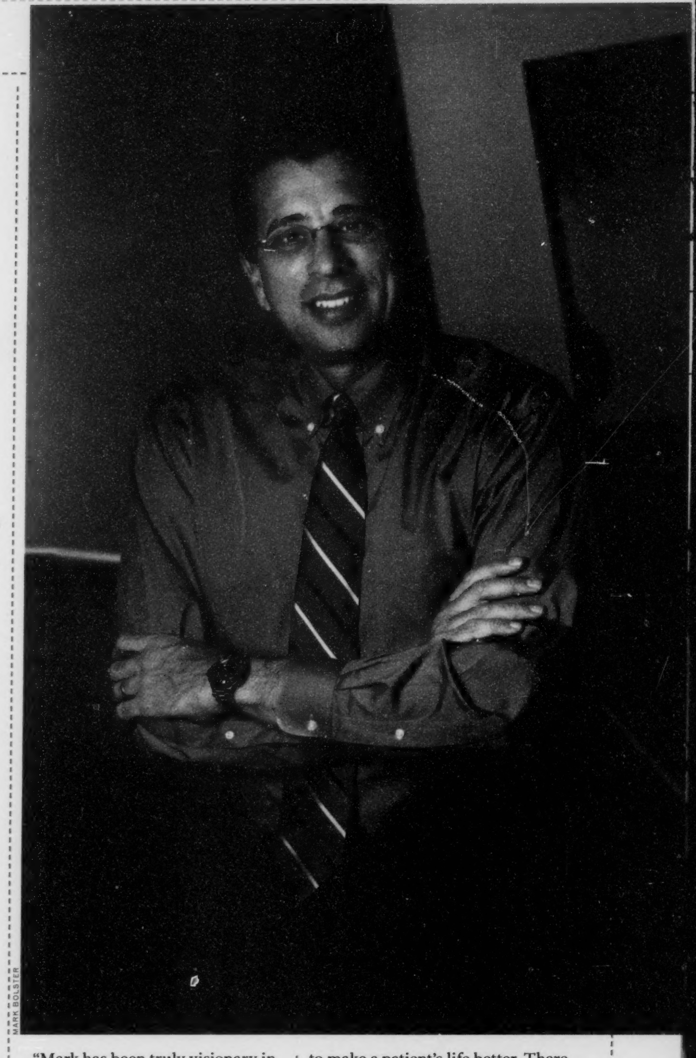
MARK HOPKINS:

Melding Administrative And Technical Skills



MARK BOLSTER

BY JOHN S. WEBSTER

MARK HOPKINS, CIO of Academic and Community Hospitals at the University of Pittsburgh Medical Center, has taken a two-pronged approach to building his IT career. A combination of IT and administrative management positions has helped him transform UPMC's enterprise infrastructure and point-of-care systems and automate large chunks of the patient care process.

"In health care, systems have been highly fragmented, but the industry has made progress in terms of standards, and we have a big push in terms of interoperability," Hopkins says. "At the same time, it has traditionally been difficult for health care organizations to communicate with each other."

ADVICE ON THE HOUSE

> "One bit of advice I can give is to never worry about what your next job will be. You should say, 'No matter what I'm doing, I'll do it well.' There will always be that next opportunity, and it's good to come to work with that mind-set.
>
> – MARK HOPKINS

Hopkins received a bachelor's degree in information systems management from the University of Maryland and began his career as a systems analyst in the insurance industry. But he says it was his job as vice president of administration at Johns Hopkins Bayview Medical Center, a 700-bed hospital in the Johns Hopkins Health System, that exposed him to the business side of health care during the 1990s.

"One thing I emphasize is you can't just think about things from an IT perspective. If you haven't dealt with the operational side, you might have problems when you want to schedule downtime, for example. There might be a best time for you, but not for clinical studies [in progress]," he explains.

In 2001, Hopkins joined UPMC as CIO for Presbyterian Hospital and Shadyside Hospital, and he took on responsibility for administrative management at Shadyside. In doing so, he combined both technical and business roles in the organization. UPMC is in the process of adopting an enterprise model, which encompasses everything from standardized IT platforms to what Hopkins calls "bedside solutions," such as physician order entry tools and systems for automated administration of medicine.

Hopkins' colleagues say his melding of technical and administrative skills has helped the organization achieve its move to automated care.

"[That transformation] is something he's adroit at, even from the technology side," says Dr. Daniel Martich, vice president of eRecord, UPMC's electronic medical records initiative. "Hospitals are cobbled together, and we have 20 hospitals and we're still adding them. There are multiple platforms with hundreds of vendors, and to standardize on a laboratory system, a radiology system, [a picture archiving and communication system] and the gamut of clinical systems is a nontrivial operational undertaking," says Martich.

"Mark has been truly visionary in how he manages information systems as well as operations," adds Liz Concordia, senior vice president of academic and community hospitals at UPMC. "From that perspective, you see the impact that IS can have, instead of just what they do or solely from an operational perspective."

Concordia attributes Hopkins' success at UPMC in large part to his fervent interest in medical care.

"Mark's hobby is exploring the cool technologies that can be used to make a patient's life better. There aren't many people who will get as down and dirty as he does. He's in the hospital at 3 a.m. to make sure a system works," she says.

For Hopkins, the path to success includes being effective in one's current position rather than continually looking ahead to that next rung on the IT ladder. ▸

Webster is a freelance writer in Providence, RI. Contact him at john.s.webster@verizon.net.

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J. CLARK KELSO:

Developing The Skills Of an IT Troubleshooter

BY JOHN S. WEBSTER

BY STEPPING into the vacuum left by a rash of accounting and procurement scandals that plagued California beginning in the 1990s, J. Clark Kelso earned a reputation as an accomplished crisis manager, in large part by restoring credibility to the state's IT operation.

Kelso, 46, now California's CIO, parlayed decades of involvement with computer learning systems, legal education and state IT initiatives to become the "go-to guy" when it came time to completely restructure the IT department.

Kelso began to acquire his unique combination of judicial and technology knowledge in the late 1970s as an undergraduate at the University of Illinois, where he helped upgrade and maintain PLATO, a computer learning application that ran on Control Data 7600 mainframes.

After he graduated, Kelso faced a difficult choice: pursue a job as a programmer at Control Data, or go in a completely different direction and enroll in law school. He chose law school. "This was during the desktop computer revolution, and I had to make the judgment," says Kelso. "But considering the way the IT industry took off, I probably made the wrong decision!"

It was through his academic pursuits as a professor of law at the University of the Pacific (having received his law degree from Columbia University) that Kelso got involved with California's legislative bodies. He traces his involvement with state government law to his work in 1990 with a California judge named George Nicholson, who was leading a countywide technology-planning initiative. As a consultant, Kelso was introduced to other ongoing IT-related state initiatives, and over the next 15 years he landed consulting contracts on a variety of state administration and court system projects.

INTO THE PUBLIC SECTOR

By the mid-1990s, Kelso had used his connections in California's judiciary and legislative circles to implement an integrated criminal justice system, which uses Justice XML, the legal system's Extensible Markup Language, to allow legal entities, such as police departments, courts, defense attorneys, state judicial systems, and corrections and parole systems, to share data.

"That was when I really got into public-sector IT," says Kelso. "When those systems are integrated using Justice XML, these applications could share data easily."

His involvement with California's IT infrastructure led to a series of appointments to clean up state agencies after a succession of scandals.

One of his biggest challenges was restoring the state's IT operation after the Department of Information Technology was rocked by a procurement controversy involving a deal with Oracle Corp. Shortly after the problems came to light in 2002, the department's legislated "sunset clause" took effect, and state lawmakers were in no hurry to continue funding the organization.

The department was eliminated, and those on its staff of 65 were suddenly looking for other jobs. Then Gov. Gray Davis tapped Kelso's crisis management expertise to revamp the state's IT infrastructure and reestablish the department.

"We accomplished a lot, largely because we were successful in getting departments to be more collaborative from an enterprise perspective, including IT infrastructure, procurement, security [and] enterprise architecture, and we focused on transformation of government services," Kelso says. "We wanted to add more transactional systems, and we consolidated the data centers and servers."

Carlos Ramos, assistant secretary of California's Health and Human Services Agency and director of systems integration, says Kelso's ability to get IT staffers, legislators and administration officials to work together was key to his success.

"He stepped in as a troubleshooter," says Ramos. "He came at a critical time, because after the scandals, the legislature didn't have much interest in renewing the department. Clark brought credibility back to the state and at the same time gained credibility with the legislature."

Kelso's key accomplishments during the IT department's transformation included consolidating two of the state's largest data centers, establishing an IT governance structure, and writing, publishing and executing a formalized strategic IT plan. "This was a first for the state," says Ramos. "The vision is a single platform and how to migrate departments to that platform."

Kelso says it was his ability to convince legislators of the value of IT that provided the necessary nudge to revamp the state's technology infrastructure.

"You have to see the value in having enterprisewide systems through collaboration and also have enough influence to convince others of that value," he says. "We depoliticized state operations." ◆

ADVICE ON THE HOUSE

KELSO

Careers don't follow a straight line, so be ready to take chances along the way. Successful leaders are the ones who make the most of their opportunities.

100 PREMIER IT LEADERS 2007

CONTINUED FROM PAGE 44

- **TRACY M. BLACK**, vice president of IT, J.B. Hunt Transport Services Inc., Lowell, Ark.
- **JAMES R. BOTTUM**, vice president for computing and IT, and CIO, Clemson University, Clemson, S.C. (formerly vice president for IT and CIO, Purdue University, West Lafayette, Ind.)
- **JO ANN BOYLAN**, executive vice president and chief technology officer, Ohio Savings Bank, Cleveland
- **PAUL T. BROWNE**, senior vice president and CIO, Trinity Health, Novi, Mich.
- **RANDY G. BURDICK**, executive vice president and CIO, OfficeMax Inc., Naperville, Ill.
- **J. RODERICK BURFIELD**, CIO, Washington Metropolitan Area Transit Authority, Washington
- **ANTONIO R. CAESAR**, CIO, Head/Penn Racquet Sports, Phoenix
- **ANTHONY CICCO JR.**, director, enterprisewide solutions, SRA International Inc., Arlington, Va. (formerly deputy chief administrative officer and CIO, U.S. Government Accountability Office, Washington)
- **BEACH M. CLARK**, vice president of IT, Georgia Aquarium, Atlanta
- **GARY D. CLARK**, senior vice president and chief technology officer, DHL International Ltd., Scottsdale, Ariz.

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Best CAREER ADVICE

The day you hate going to work at a company is the day you should look for a new job. Your unhappiness will eventually lead to a degradation in your performance.

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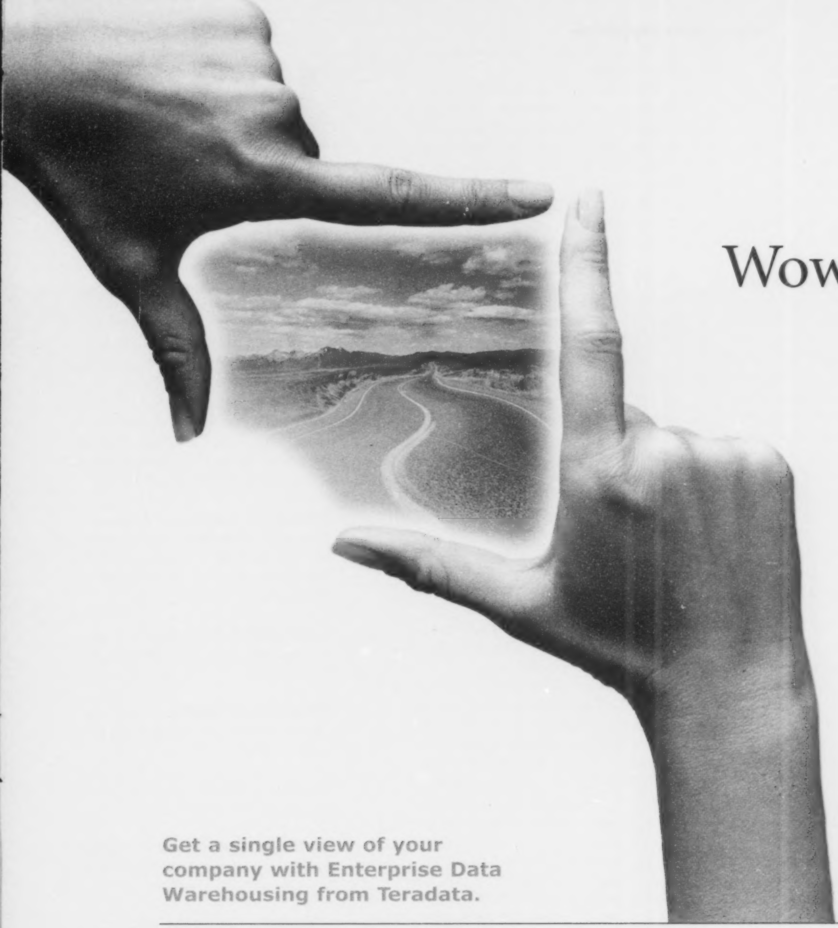

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JANICE MALASZENKO:

Adding Cultural Awareness to Technical Sharpness

ADVICE ON THE HOUSE

> “Listen, listen, listen! Understand the objectives and language of the business. IT is not just about technology; it's about bringing value to the business – IT is an enabler.
>
> – JANICE MALASZENKO

BY JOHN S. WEBSTER

JANICE MALASZENKO has combined a penchant for understanding global cultures with a profound knowledge of technology. The 58-year-old vice president and chief technology officer of strategy, architecture and standards for Xerox Information Management, the IT arm of Xerox Corp., used those talents to oversee the document-processing giant's reorganization of its IT infrastructure, which included the decision to outsource a large chunk of technology — including legacy applications, data centers and networking.

“One thing that has been important for me has been aligning technology and business and being effective in solutions. It's important to have an understanding of not only technology, but of business culture in different global surroundings,” she says.

After receiving a master's degree in computer science from the New Jersey Institute of Technology in 1981, Malaszenko's career path began with a stint as a systems analyst at Exxon Corp. She went on to hold information systems planning, research and development, and implementation management positions at Exxon that required extensive international travel.

During the course of her stay at Exxon, she moved from systems to the data center. “It was a good early lateral move to the operations side. I could also see the challenges of the data center from the other side — from IT. Then, I was managing the consolidation of financial systems, and I had the opportunity to travel globally.”

After Exxon, Malaszenko moved into an IT management position in the apparel industry. But she discovered that the industry's technology and strategy standards were not as high as she had become accustomed to at Exxon, and it was not a good “cultural fit,” she says. Next, she moved into the telecommunications industry, but there she missed the international business reach of her old job at Exxon.

“I was interested in getting back into a multinational company,” Malaszenko explains. “I felt I excelled at and enjoyed that. It resonated with a lot of things I liked, including the global perspective and being able to have more of an impact on the company's direction. Then, in 1992, I got a tap on the shoulder from Xerox. They were starting to look at requirements for a new strategy for use of IT. It was a great opportunity to create personal change and have a major effect on the corporation.”

In order to augment her computer science education and professional background, Malaszenko attended Rochester Institute of Technology part time while at Xerox, earning an MBA in 1995.

Leader Do-Over

MALASZENKO

Early on in my career, I ran into a difficult situation with time, financial and staff skill constraints. I tried my hardest to make it all work, but in retrospect, it was clear that a replan was needed a lot sooner than I was willing to admit. I now know that engaging my manager sooner for assistance would have been a better approach. Luckily, however, we were able to rescue the program and meet a good part of the original commitments.

“Moving back and forth between, on one hand, the strategic and tactical planning and, on the other, staff and operational planning, keeps you grounded,” she says. “If you only focused on strategy, you'd lose focus on what's going on in the real world. If you have the opportunity to move back and forth, you should do that.”

RARE TALENT

It's that combination of technical and business know-how that Malaszenko's colleagues most admire.

“She is very strong technically and keeps up with the technology both internally with regard to our overall strategy and externally in the industry,” says Annamarie Hew, manager of staff operations and communication for Xerox Information Management. “At the same time, she's very well respected by the business group. Sometimes IT people aren't as knowledgeable about the business side, but she picks up on benefits and implications of technology on business very quickly. When you've been at Xerox a long time and you think you know everything, she'll be looking at a problem a little differently.”

A significant part of Malaszenko's task at Xerox has involved delivering enterprise platforms and integrated systems across multiple business units in a variety of locations worldwide. For Xerox IT managers whose purviews lie outside North America, Malaszenko's influence has been extensive.

“Credit should be given to her dedication and willingness to obtain your perspective, including strategy,” says Solomon Viera, vice president of enterprise applications and formerly a manager of Oracle software implementation for Xerox's locations in Latin America. “Often you have an ivory tower, where the corporate group develops the strategy. The key to her success is a strategic understanding of alignment from an IT and business perspective.”

Looking back over her career, Malaszenko says there has been a shift in her goals. Where once her goal was to reach the top in the IT department, now it's to bring value to the organization.

“My career goals have evolved,” she says. “In the IT industry, the early goal was always the promotional opportunities. But now, I've focused on where . . . you can deliver value and see results.” ▶

100 PREMIER IT LEADERS 2007

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- **K.C. CONDIT**, director of technical services, Rent-A-Center Inc., Plano, Texas
- **DICK DANIELS**, divisional CIO, Capital One Auto Finance, Capital One, Plano, Texas (see story, page 46)
- **RAJ DATT**, vice president and CIO, Kennametal Inc., Latrobe, Pa. (formerly vice president and CIO, Panasonic Automotive Systems Company of America, Peachtree City, Ga.)
- **ISRAEL DEL RIO**, president, Abstraction Software LLC, White Plains, N.Y. (formerly senior vice president of technology solutions, Starwood Hotels & Resorts Worldwide Inc., White Plains, N.Y.)
- **VAVA DIMOND**, vice president of applications development, Schneider National Inc., Green Bay, Wis.
- **BARBARA DOLHANSKY**, associate vice president of computer services, Temple University, Philadelphia
- **ROBERT J. DOWD**, CIO, Sonora Quest Laboratories LLC, Tempe, Ariz.
- **STEVE M. ELLIS**, executive vice president and head of wholesale services, Wells Fargo Investments LLC, San Francisco
- **KENNETH D. FERDERER**, formerly CIO, former TelCove Inc., Canonsburg, Pa.
- **JAMES J. FOOTE**, vice president of field technology and technical services, Automatic Data Processing Inc., Dealer Services Division, Portland, Ore.

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Best CAREER ADVICE

Concern yourself with everything except your paycheck.

K.C. CONDIT

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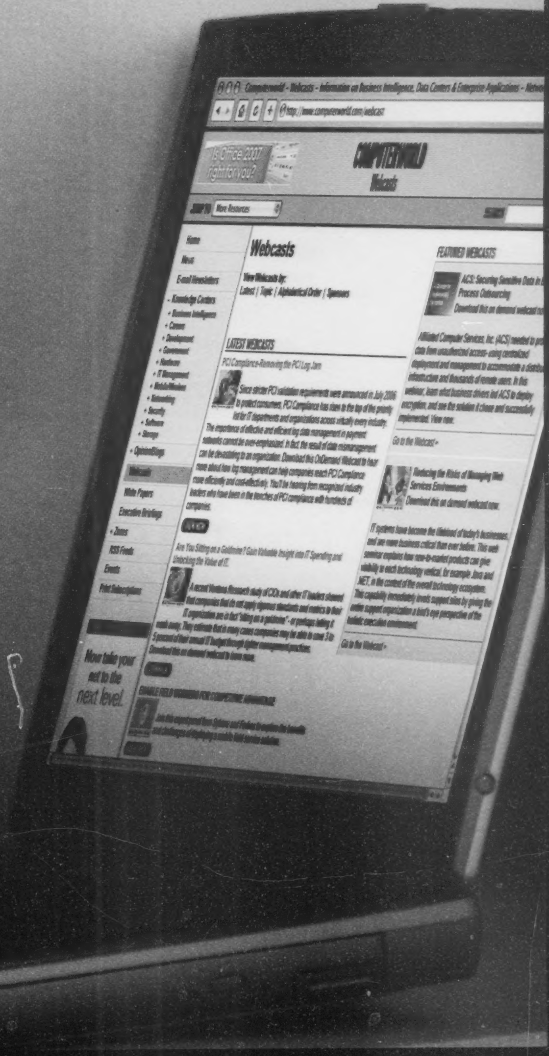

CHRIS HARTLOVE

Leader Do-Over

"I once accepted a promotion into a position in another government agency that I really didn't want, simply because it was a higher grade level. I've since learned that grade level isn't what's important. When you spend as much time at work as I do, it's much more about the challenges, the people and the accomplishments.

If you can't have fun in your job, you should look for a new job. However, if I had it to do over again, I might still make the same decision, because that job was on the path that got me where I am today, and I love my current job!

DONNA SEYMOUR, CIO,
U.S. MARITIME ADMINISTRATION

DONNA SEYMOUR:

Viewing Each Job as a Learning Opportunity

BY BOB VIOLINO

DONNA SEYMOUR, CIO at the U.S. Maritime Administration, has built a successful career in IT in the public sector by embracing each job she has had as a chance to learn and enhance her management skills.

Seymour, 46, began working in the federal government in 1978 as a secretary in the Department of Defense. At the advice of a mentor, she studied to become a computer programmer, and she later became an IT security specialist at the Naval Air Systems Command, or Navair.

The mentor's suggestion turned out to be very good advice. Benefiting from the knowledge and experience of others has helped Seymour in her career ever since. "I've had mentors all the way, even when I was a secretary," she says.

As director for national projects at Navair in the mid-1990s, Seymour led a team that built an IT infrastructure to support the organization's major objectives. The $300 million infrastructure included a global system of integrated networks, messaging, public-key infrastructure, Web management and information systems security.

After that, Seymour became a principal in the Program Executive Office for IT at Navair, managing an effort to eliminate tens of thousands of redundant business applications across the U.S. Navy. She later was named CIO at Navair, her first senior executive position in IT.

About two years ago, Seymour was named CIO of the Washington-based Maritime Administration, which is responsible for overseeing the operations and security of the U.S. maritime transportation system. Among the key IT initiatives she has overseen is the development of a paperless acquisition process — built on an enterprise content management platform — that automated much of the multistep bid and proposal process for the administration. By eliminating paper and hundreds of hours of labor, the system has brought huge savings and cut in half the time required for major acquisitions such as ship management services.

Eileen Roberson, associate administrator at the Maritime Administration and Seymour's supervisor, says Seymour is successful in her role largely because of her energy level. "She's probably the most energetic person you'd ever meet," Roberson says.

Seymour's eagerness to gain knowledge is also important. "Especially in the area of information technology, that's key," Roberson says. "You have to be a continuous learner." ▶

Violino is a freelance writer in Massapequa Park, N.Y. Contact him at bviolino@optonline.net.

ADVICE ON THE HOUSE

"I have been most fortunate in my career to have exceptional bosses who were great leaders and who taught me what it's like to be a leader. As a CIO, you've got to have clear acceptance of the vision and mission of the organization.

– DONNA SEYMOUR

PHIL HOLLENBECK

LINDA ANN GOODSPEED:

Job Mobility Leads to Success

BY EUGENE A. DEMAÎTRE

Linda Ann Goodspeed, 44, has moved among companies as well as roles during her career. "I stayed with a company long enough to understand how it worked, then moved," says Goodspeed, now executive vice president and chief supply chain, logistics and technology officer at Lennox International Inc., a heating and refrigeration company in Richardson, Texas.

"I never really had a central strategy; I just wanted to grow and learn as much as possible and always feel challenged in the positions that I held," Goodspeed says. "Some people view moving between companies as being risky, but I viewed it as another challenge. I think that if you work hard, remain challenged and stretch yourself to the level of being uncomfortable, then you are growing. If you can do that within the same company, then you should strive to do that."

Goodspeed, who has a mechanical engineering background, says that when she started working at Ford Motor Co. in the late 1980s, "there were two computers for 200 engineers." She did some interface programming for heavy truck onboard diagnostic equipment.

From Ford, Goodspeed went to Nissan Motor Co. in 1994, where she was part of a team that developed several systems for tracking documentation when Nissan opened a research and development division in Farmington Hills, Mich.

She then moved to General Electric Co. in 1996 before becoming president of a dot-com and finally moving to Lennox.

"From GE management, I moved back and forth from the traditional design engineering group to running a business at a dot-com, then back to technology roles," Goodspeed says. "Moving between companies gave me a different perspective on business as I changed between different industries and experienced different business cultures."

Goodspeed credits GE with helping her develop as a leader. "The company takes risks on people and moves them into roles that are increasingly challenging, and it has confidence in what they're capable of," she says. She tries to develop her co-workers in the same way, encouraging them to gain a mix of technology and business experience.

Rod Flory, vice president and CIO at Lennox, reports to Goodspeed and manages Lennox's IT organization. "I started in IT out of college as an application developer supporting the manufacturing operations area, then I progressed to various IT management positions," he says. "Coming from the application area and supporting various business functions really helped me develop business acumen."

Goodspeed agrees: "I had exposure to IT within each role of my career and quickly learned how valuable it is as a business enabler. It's a valuable learning experience to be a part of a business unit to really understand the business needs, and it's important for Rod to also have this experience at some point in his career."

Lennox CEO Robert Schjerven deserves credit for having the "foresight to give me the freedom to grow this position to best deliver results to our bottom line," says Goodspeed. "The chief technology officer role enables Lennox to drive technology into the business, which enhances our competitive advantage."

Flory says he is grateful to Goodspeed for changing the role and perception of IT at Lennox. "Linda represents IT well as part of [Lennox's] executive management team," he says. "Since she has joined the company, it seems as though IT has gained a seat at the executive management table."

Even after reaching the executive level, Goodspeed says, "I never feel like I'm done. I'm always looking for new ways of doing things and new ideas." ◆

ADVICE ON THE HOUSE

> "Take the tough jobs: don't be afraid of a challenge – this applies to any executive job. Try to learn from the leaders in the business and use your talents to help them in any way possible – not just in your own discipline, but in cross-functional roles.
>
> – LINDA ANN GOODSPEED

PREMIER 100 IT LEADERS 2007

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- **EILEEN C. GABRIEL**, senior vice president and CIO, Dick's Sporting Goods Inc., Pittsburgh
- **ANDY GEISSE**, CIO, AT&T, San Antonio
- **RICK GONZALEZ**, director of IT, NJVC LLC, Vienna, Va.
- **LINDA ANN GOODSPEED**, executive vice president and chief supply chain, logistics and technology officer, Lennox International Inc., Richardson, Texas (see story at left)
- **DAVID G. GREENWOOD**, vice president of strategic technology and innovation, Genworth Financial Inc., Richmond, Va.
- **JERROLD M. GROCHOW**, vice president for information services and technology, Massachusetts Institute of Technology, Cambridge, Mass.
- **DAVID M. GUTHRIE**, executive vice president and chief technology officer, Premiere Global Services Inc., Atlanta
- **RODERICK L. HAMILTON**, CIO, Hygeia Corp., Miami Lakes, Fla.
- **JOHN S. HELLER**, CIO, Caterpillar Inc., Peoria, Ill.
- **ANDREAS HESTERMEYER**, CIO and director of customer care, processes and technology, Volkswagen of America Inc., Auburn Hills, Mich.
- **DANIEL C. HILL**, senior vice president and CIO, Exelon Corp., Chicago
- **JOHN S. HINKLE**, vice president and CIO, Trans World Entertainment Corp., Albany, N.Y.
- **JAMES P. HIRSCH**, associate superintendent for technology and CIO, Plano Independent School District, Plano, Texas
- **MARK T. HOPKINS**, CIO, Academic and Community Hospitals, University of Pittsburgh Medical Center, Pittsburgh (see story, page 48)

CONTINUED ON PAGE 56

KATHLEEN McNULTY:

Developing A Reputation As a Problem-Solver

BY MONICA SAMBATARO

Kathleen McNulty, 47, began her career as an application developer some 20 years ago and quickly became known as a problem-solver as she progressed through a range of IT roles at companies such as Rochester Gas & Electric Corp. and Xerox Corp.

But that's not to say that McNulty sees herself as someone with all the answers. "On a good day, you may come up with 40% of a solution. But if you talk with other people, you can get up to 90%," says McNulty, now senior vice president and CIO at The Schwan Food Co.

McNulty not only advises aspiring leaders to seek out the knowledge of others but also to cast a wide net. "Be involved in as many disciplines of IT as you can," she suggests.

During her 12 years at Rochester Gas & Electric, McNulty helped transform "problem" projects into successful business initiatives, working on everything from help desk and project management to systems software and network and infrastructure management. That broad exposure laid the foundation for her move to Xerox, where a manager encouraged McNulty to get involved in progressively higher-level cross-company projects.

ADVICE ON THE HOUSE

McNULTY

One of the things I would tell people looking to move up in IT is don't be afraid to surround yourself with smart people – embrace their knowledge, and leverage it to make the collective knowledge better for the company.

Dave Deines, director of information systems security at Schwan, a multibillion-dollar frozen food company in Marshall, Minn., says McNulty's range of experience enables her to "see the whole picture, the endgame."

"She's really focused on making the right investments for the business," Deines says. "She wants to take the long-term approach, and that pays off."

Balancing what a company requires in the near term with what will position it to be successful in the future is one of the biggest challenges IT leaders face today, McNulty notes.

And no matter what the goal is, the way to achieve it isn't always clear.

For example, while working at Xerox, McNulty made outsourcing decisions that were more focused on cost savings than on how they would affect the company's culture. The organizational-change element should have been a bigger consideration, she says.

"I found that driving to lowest cost is not always the best answer for the business," McNulty says. "What I learned is to always look at all the factors of a change you are making."

She stresses, though, that failure "is a learning event." McNulty says she's been lucky in her career to have had managers who presented her with challenges and let her run with ideas – and who didn't make her "feel foolish when the path was wrong." More can be learned from taking the initiative than from simply following directives, she says.

But to truly grow and flourish, people have to like their work and find ways to make it interesting and challenging – no matter where they stand in the IT chain, McNulty adds. "I honestly enjoy what I do," she says, adding that her career path has been a natural progression as a result.

"I've never been career-focused to say, 'Here's what I want to do,' " McNulty says. "I've always been a believer that if I'm good at what I do, opportunities will present themselves." ▸

PREMIER 100 IT LEADERS 2007

Best CAREER ADVICE

I clearly remember my father giving me three pieces of advice: Do your best in whatever you do, and put your heart and soul into it. Never ask for a position or a role: If you are good enough, it will come to you. Keep helping others in whatever way you can. My father evolved these principles over his life as an infantry officer and as a good human being. I certainly try to live these values in my professional life.

CONTINUED FROM PAGE 55

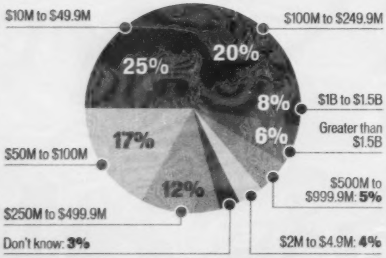
- **JAMES T. HOPPER**, vice president and CIO, Applied Industrial Technologies, Cleveland
- **CAROLYNN J. HORRELL-CHAMOUN**, CIO, Telerx Marketing Inc., Horsham, Pa.
- **JERRY J. HUNTER**, vice president of common infrastructure systems, Sun Microsystems Inc., Broomfield, Colo.
- **J. CLARK KELSO**, state CIO, state of California, Sacramento, Calif. (see story, page 50)
- **JOHN P. KICHAK**, vice president and CIO, UNC Health Care, Chapel Hill, N.C.
- **RICHARD H. KING**, executive vice president and chief operating officer, Thomson North American Legal, Eagan, Minn. (formerly senior vice president and chief technology officer, Thomson Legal & Regulatory)
- **K. ANANTH KRISHNAN**, vice president and chief technology officer, Tata Consultancy Services Ltd., Chennai, India
- **NORBERT J. KUBILUS**, CIO, Sunterra Corp., North Las Vegas
- **JARNAIL S. LAIL**, vice president of application services, W.W. Grainger Inc., Lake Forest, Ill.

CONTINUED ON PAGE 58

WHAT THEY SPEND

Well over half of the 2007 IT leaders have charge of IT budgets that have grown 13% year to year on average.

TOTAL IT BUDGET FOR 2007



SOURCE: COMPUTERWORLD'S 2007 PREMIER 100 IT LEADERS

PEOPLE POWER

More than half of the 2007 IT leaders oversaw staffing growth within their departments this past year.

2006 STAFF CHANGES	
Increased staff size	59%
Decreased staff size	10%
No change in staff size	31%

Average size of IT staff:	2,566
Average size of IT staff for which each honoree is responsible:	1,489

Career Do-Over

Many years ago, I designed and delivered a business solution as per the scope and spec the user group reviewed and signed off on. Though the solution was delivered on time as per the user spec, it did not meet the business requirement. As it turned out, it was an inappropriate spec. The valuable lesson learned was never to take the user request as gospel. Always double-check, observe and conduct workshops before finalizing the design.

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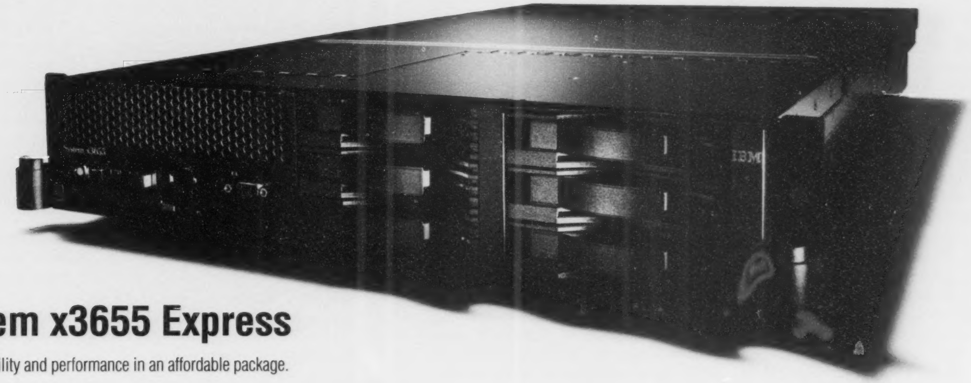

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*All prices are IBM's estimated retail selling prices as of October 3, 2006. Prices may vary according to configuration. Resellers set their own prices, so reseller prices to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features or services discussed in this document in other countries. Prices subject to change without notice. Starting price may not include a hard drive, operating system or other features. Contact your IBM representative or IBM Business Partner for the most current pricing in your geography. 1. Based on "IDC, 'The Impact of Power and Cooling on Data Center Infrastructure,' Document #201722, May 2006," page six, which highlights that a rapidly rising server-installed base is projected to drive an increase in the cost of power and cooling over the next five years. 2. PowerExecutive can help save power during periods of lower utilization. 3. IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply. Telephone support may be subject to additional charges. For on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. On-site warranty is available only for selected components. 4. IBM Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Monthly payments provided are for planning purposes only and may vary based on your credit and other factors. Lease offer provided is based on a FMV lease of 36 monthly payments. Other restrictions may apply. Rates and offerings are subject to change, extension or withdrawal without notice. Information about non-IBM products is obtained from the manufacturers of those products or their published announcements. IBM has not tested those products and cannot confirm the performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products. IBM, the IBM logo and PowerExecutive are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. AMD, the AMD logo, AMD Opteron and AMD PowerNow! are trademarks of Advanced Micro Devices, Inc. Other company, product and service names may be trademarks or service marks of others. ©2006 IBM Corporation. All rights reserved.

JAMES ONALFO:

Early Tech Fascination Leads To a Lifelong Career

ADVICE ON THE HOUSE

ONALFO

James Onalfo, who has reported to company presidents and CEOs for much of his career and counted them as mentors, stresses the importance of having advisers who help with important career and job decisions. "They helped me understand how to deal with priorities," an important skill for senior-level executives and IT staffers alike, he says.

BY BOB VIOLINO

How many people get to spend their entire career doing what they set out to do when they plotted their professions in college? James Onalfo, 67, deputy commissioner and CIO of the New York City Police Department, is one of those people.

Onalfo knew when he was attending the University of Connecticut in the early 1960s that he wanted to work in a profession where he could improve processes. For one of his courses, he analyzed the way people worked in a hospital restaurant. While the assignment didn't involve IT – few organizations were using computers in those days – it did pique Onalfo's interest in working to improve the way things are done. As new technologies emerged in the coming years, he would spend his time looking for ways to use IT to help improve processes.

While serving as a supply officer in the U.S. Army following college, Onalfo was responsible for implementing a new inventory system and automating the ordering process. "My first two tasks out of school were systems-type work; that was my first exposure to computers," Onalfo says. He joined Honeywell as a systems analyst, his first job in IT. Later, he went to work for General Foods (which became part of Kraft), where he took on a number of high-profile IT positions. Among those were director for major applications for the Post division, and CIO of the company's Brazilian and Australian operations, each of which received a complete IT overhaul under his leadership.

Onalfo later served as CIO at Kraft Foods International, at a time when the company grew from $2.5 billion to $12 billion in revenue and made 40 acquisitions worldwide. He subsequently held CIO posts at Kraft parent company Philip Morris Cos. and The Stanley Works.

By 2003, Onalfo had retired, but he was recommended for the NYPD position by Lou Gerstner, former CEO of IBM, and Nick Donofrio, an executive vice president at IBM. Onalfo met with New York Police Commissioner Raymond Kelly and Mayor Michael Bloomberg and accepted the position. Onalfo says he came out of retirement to take the job "because I thought it would be an important thing to do. It's probably the most important thing I've ever worked at, because I'm helping police officers and the safety of the city. That kind of role interested me."

Onalfo's years of serving as a corporate IT executive make him well suited to run the complex IT operations of the NYPD, where he oversees a staff of 2,000, including IT personnel, emergency operators and dispatchers, managers and others, says Kelly. "He's had tremendous experience in the private sector as a CIO," Kelly says. "We were very fortunate to get Jim."

Among Onalfo's most significant accomplishments at the NYPD is the development of its Real Time Crime Center (RTCC). The NYPD has used the center to work on more than 3,500 cases since it was launched in July 2005. The NYPD developed what Onalfo describes as specialized "super finder tools" to accommodate the quick retrieval of multiple facts about a crime to help detectives solve cases.

The RTCC has saved detectives countless hours in searching for data, giving them more time to devote to crime-solving techniques. They can also access vital information that wasn't previously available. Kelly says the RTCC has helped the NYPD to continue to reduce crime in the city.

What's the most valuable career advice Onalfo has ever received? "If you shoot for the moon, you will achieve high goals; don't let difficulties get in the way of getting the job done; and respect people and harness their power." ▸

PREMIER 100 IT LEADERS 2007

CONTINUED FROM PAGE 56

■ **KEN A. LEHMAN**, group director of shared services operations, Northrop Grumman Corp., Dallas

■ **DARRYL P. LEMECHA**, CIO and senior vice president of shared services, ChoicePoint Inc., Alpharetta, Ga.

■ **ROBERT R. LOGAN**, vice president of enterprise infrastructure services, Science Applications International Corp., San Diego

■ **MARIBETH LUFTGLASS**, assistant superintendent and CIO, Fairfax County Public Schools, Annandale, Va.

■ **JANICE L. MALASZENKO**, vice president and chief technology officer of strategy, architecture & standards, Xerox Information Management, Xerox Corp., Rochester, N.Y. (see story, page 52)

■ **ELLEN S. MARTIN**, vice president of supply chain systems, VF Corp., Greensboro, N.C.

■ **KATHLEEN A. McNULTY**, senior vice president and CIO, The Schwan Food Co., Marshall, Minn. (see story, page 56)

Leader Do-Over

"Early in my career, I made the unintentional decision to balance more toward work than family. I feel that I missed important pieces of my daughters' childhood, such as class plays and sporting events, because I was so dedicated to the job. Fortunately, after a 10-year lull, we were blessed with a third child, a boy who is now six. When my son was born, I made the commitment to be a bigger part of his life than I had been for my daughters. If I had to do it all again, I would have adjusted the balance more toward family earlier. In the end, family is the most important aspect of one's life.

KEN A. LEHMAN, GROUP DIRECTOR OF SHARED SERVICES OPERATIONS, NORTHROP GRUMMAN CORP.

Leader Do-Over

"Looking back, perhaps my worst decision was second-guessing my career path at Accenture. My career didn't always travel in a straight line. Early on, I envisioned a career as a trauma surgeon after working briefly as an emergency medical technician. Soon after joining Accenture as a researcher in Chicago in 1987, I left to attend medical school – only to return to the company a year later. The reversal wasn't easy but was worth the effort. I had earlier delayed beginning college until I was 21 because my relatives relied on me to help run the family business. In retrospect, the experiences made me a stronger and more adaptable leader. Once I made a final choice about my career, I found it easy to apply my drive, focus and determination to distinguish myself quickly and move ahead.

FRANK MODRUSON, CIO, ACCENTURE LTD.

■ **DENNIS H. MEHMEN**, CIO and vice president of business information services, Grinnell Mutual Reinsurance Co., Grinnell, Iowa

■ **DALE W. MEYERROSE**, associate director of national intelligence and CIO, Office of the Director of National Intelligence, Washington

■ **FRANK B. MODRUSON**, CIO, Accenture Ltd., Chicago

■ **MICHAEL NEFF**, CIO, Heidelberger Druckmaschinen AG, Wiesloch, Germany

■ **STEPHEN R. OLIVE**, vice president of information solutions and CIO, Raytheon Co., Integrated Defense Systems, Billerica, Mass.

■ **STEVE OLSEN**, executive vice president and CIO, CheckFree Corp., Norcross, Ga.

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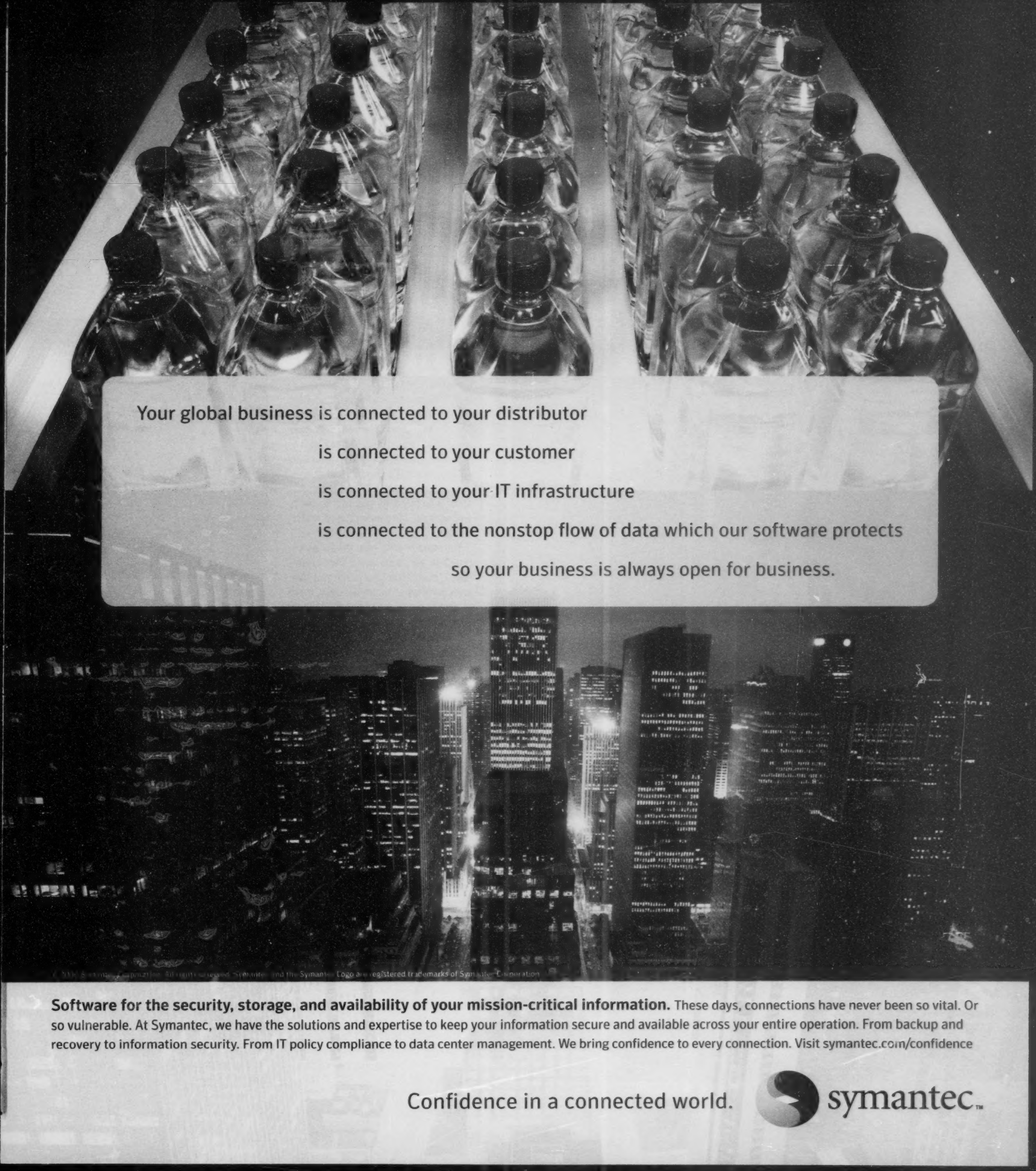
Best CAREER ADVICE

Do the right thing, at the right time, for the right reason.



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is connected to the nonstop flow of data which our software protects
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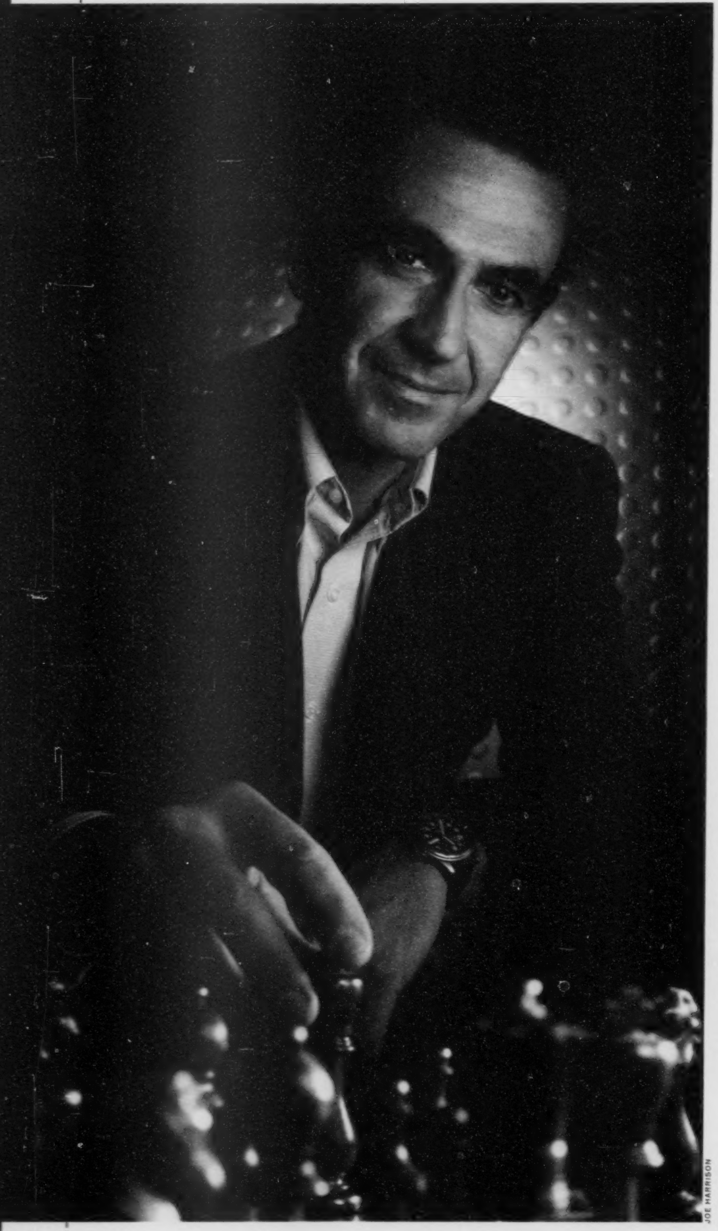

JOE HARRISON

FILIPPO PASSERINI:

Using Strategic Thinking to Enable IT

BY BOB VIOLINO

Filippo Passerini attributes his business and personal style to lessons learned while playing competitive chess as a teenager. One lesson is to continually anticipate what's coming and think two, three or more moves ahead. Another is to pay attention to the clock and not take too much time to make a move.

"You need to plan your thinking time in a very wise way," Passerini says. "No matter how much you can anticipate what is coming next, there is a point where you need to make the move. That's very relevant to the way we do business."

Passerini, 49, global services officer and CIO at The Procter & Gamble Co., oversees an IT staff of 2,500 people at one of the largest and best-known consumer goods companies in the world. A native of Rome, Passerini joined P&G in 1981 and held a series of IT management roles in the U.K., Greece, Italy, the U.S., Latin America and Turkey before being named CIO in 2004. As global services officer, he oversees more than 70 worldwide business services and three key business partnerships.

The most successful IT project at P&G in the past 12 months, according to Passerini, was to "reinvent" IT at the company. P&G pulled all IT employees scattered in business units throughout the company into one organization, renamed the IT unit Information and Decisions Solutions and retrained its staff, with the goal of transforming IT from a back-office support function to a strategic business partner.

The change is already leading to much greater IT-business collaboration on strategic issues and helping to chart the future course of the company, Passerini says.

ADVICE ON THE HOUSE

> "Clearly identify what you stand for, always make an effort to put yourself in the shoes of people who have bigger responsibilities than you do, and balance strategic thinking with the quality of execution.
>
> – FILIPPO PASSERINI

Passerini has invested a lot of energy into making IT a "core strategic contributor," says Giorgio Siracusa, vice president of human resources, employee and workplace services at P&G. Siracusa works closely with him on IT staffing issues and says Passerini is a great boss because he values people. "He knows the organization inside and out," Siracusa says. "He knows the names of people better than I do, and I'm in HR."

Becoming a CIO was never a specific goal of Passerini's while he was progressing in his career. His aim was to do the best he could at whatever job he was given. "That's what I've done all my life and continue to do today," he says.

Passerini says he has benefited from having numerous mentors in his career and from working in different parts of the world with people who have a variety of management styles and backgrounds.

Among the things he's learned is that regardless of a person's role in IT or business, it's critical to bring the right attitude.

"We can really influence the job we're in," he says. "The dream job is not what the job is, but what we make it." ▸

100 PREMIER IT LEADERS 2007

CONTINUED FROM PAGE 58

V. JAMES ONALFO, deputy commissioner and CIO, New York City Police Department, New York (see story, page 58)

JOSEPH A. OSBOURN, executive vice president and worldwide CIO, Tech Data Corp., Clearwater, Fla.

MARIA PARDEE, CIO, BT Retail, BT Group PLC, London

FILIPPO PASSERINI, global services officer and CIO, The Procter & Gamble Co., Cincinnati (see story, page 60)

WILLIAM EDWARD PENCE, senior vice president and chief technology officer, Napster LLC, New York

Best CAREER ADVICE

I was once told, 'If it feels really good to say, you probably shouldn't say it.' That has a profound impact on relationships with others – they don't believe you stand ready to attack.

LARRY QUINLAN, CIO, DELOITTE & TOUCHE USA LLP

BETH S. PERLMAN, CIO and senior vice president, Constellation Energy Group, Baltimore

MARK A. QUIGLEY, senior vice president and CIO, EMC Corp., Hopkinton, Mass.

LARRY QUINLAN, CIO, Deloitte & Touche USA LLP, Hermitage, Tenn.

LARS RABBE, senior vice president and CIO, Yahoo Inc., Sunnyvale, Calif.

THIYAGARAJAH RAJAH, CIO, CLSA Ltd., Hong Kong

TIMOTHY C. RAMSAY, associate vice president of IT, University of Miami, Coral Gables, Fla.

BRIAN RANGER, general manager of systems and technologies, PCL Constructors Inc., Edmonton, Alberta

DON R. RILEY, CIO, Mohawk Industries Inc., Dalton, Ga.

BRYAN M. SASTOKAS, director of information services, strategy and architecture, Universal Service Administrative Co., Washington

DAVID N. SAUL, senior vice president, Office of Architecture, State Street Corp., Quincy, Mass.

DONNA K. SEYMOUR, CIO, U.S. Maritime Administration, Washington (see story, page 54)

YEN-PING SHAN, former CIO, chairman, and senior vice president of engineering and development, Reynolds and Reynolds China, The Reynolds and Reynolds Co., Kettering, Ohio

Best CAREER ADVICE

Early to rise, work like heck, and advertise. A career is made by working extremely hard, not being afraid to give it all you've got, and by communicating the successes of the team. A passionate determination to serve others is what makes the difference between a good job and a great career.

GERALD W. SHIELDS, [illegible]

GERALD W. SHIELDS, senior vice president and CIO, U.S., Aflac Inc., Columbus, Ga.

MARK E. SHOWERS, CIO, Monsanto Co., St. Louis, Mo.

BARRY L. SHULER, senior vice president of IT strategy and chief technology officer, Marriott International Inc., Washington

DANNY A. SIEGEL, director of data warehousing and business intelligence, Pfizer Inc., New York

DEBRA SLEIGH, vice president and CIO of clinical applications, Sutter Health, Mather, Calif.

DONNA M. SLYSTER, senior vice president and CIO, CHEP, Orlando

GREGORY S. SMITH, vice president of IT and CIO, World Wildlife Fund, Washington

VIJAY SONTY, CIO, education technology services, School Board of Broward County, Sunrise, Fla.

JUDITH SPITZ, CIO, Verizon Business, Basking Ridge, N.J.

BARRY D. STRASNICK, CIO, CitiStreet LLC, North Quincy, Mass.

KENNETH D. THEIS, chief deputy director, Michigan Department of IT, Lansing, Mich.

MICHAEL M. THOMAS, vice president and general manager, Lockheed Martin Integrated Systems & Solutions, Fairfax, Va.

LYNN H. VOGEL, vice president and CIO, The University of Texas M.D. Anderson Cancer Center, Houston

PETER R. WALTON, vice president and CIO, Hess Corp., New York

ALINE M. WARD, CIO, Mississippi Power, Southern Co., Gulfport, Miss.

NIGEL J. WATSON, vice president of IS, transportation portfolio, United Parcel Service of America Inc., Louisville, Ky.

ROLAND J. WHITEHEAD, global director of IT, Bonhams 1793 Ltd., London

LYNN R. WITHERSPOON, vice president and CIO, Ochsner Health System, New Orleans

DENISE D. WOOD, corporate vice president and chief information security officer, FedEx Corp., Collierville, Tenn.

ANDREAS WUCHNER, head of global IT security, Novartis International AG, Basel, Switzerland

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How the Leaders Were Chosen

Each year, *Computerworld* evaluates nominated IT executives for inclusion as Premier 100 IT Leaders in a multistep survey process. For a detailed look at our methodology, visit *Computerworld.com*. Special thanks go to our 10 judges, themselves Premier 100 IT Leader alumni, who helped select this year's honorees.

JERRY BARTLETT, vice president, application development and quality assurance, TD Ameritrade Holding Corp., Columbia, Md. (2005 HONOREE)

REBECCA A. BLALOCK, senior vice president and CIO, Southern Company Services, Atlanta (2006 HONOREE)

NIDA S. DAVIS, chief architect, Federal Reserve Information Technology, Richmond, Va. (2006 HONOREE)

DALE N. FRANTZ, CIO, Auto Warehousing Co., Tacoma, Wash. (2005 HONOREE)

JOANNE M. KOSSUTH, CIO, Franklin W. Olin College of Engineering, Needham, Mass. (2005 HONOREE)

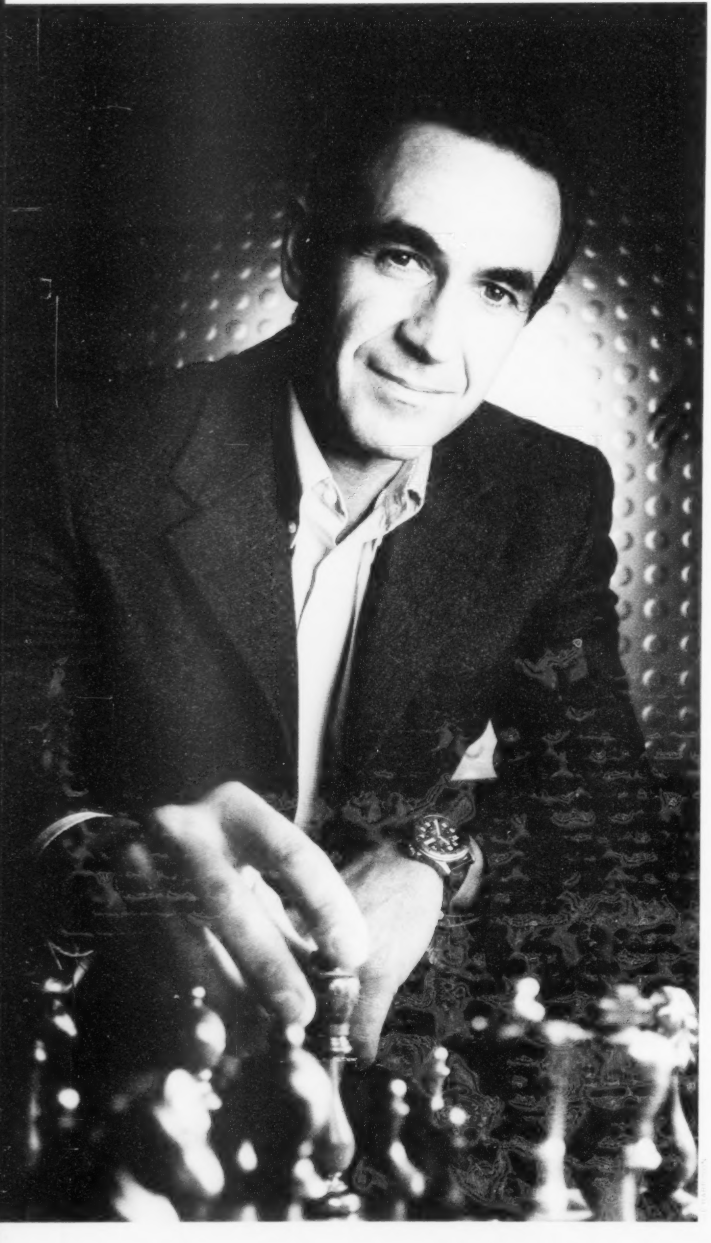
ENZO MICALI, senior vice president and CIO, 1-800-Flowers.com, Westbury, N.Y. (2006 HONOREE)

DIANAH L. NEFF, senior partner, Civitium LLC, Alpharetta, Ga. (formerly CIO, city of Philadelphia) (2006 HONOREE)

JAN G. RIDEOUT, vice president and CIO, Northrop Grumman Ship Systems, Pascagoula, Miss. (2005 HONOREE)

ROBERT A. ROSATI, senior vice president and CIO, Werner Co., Greenville, Pa. (2001 HONOREE)

BRIAN A. YOUNG, vice president for IT, Creighton University, Omaha (2005 HONOREE)



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IT LEADERS 2007

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V. JAMES ONALFO, deputy commissioner and CIO, New York City Police Department, New York (see story, page 58)

JOSEPH A. OSBOURN, executive vice president and worldwide CIO, Tech Data Corp., Clearwater, Fla.

MARIA PARDEE, CIO, BT Retail, BT Group PLC, London

FILIPPO PASSERINI, global services officer and CIO, The Procter & Gamble Co., Cincinnati (see story, page 60)

WILLIAM EDWARD PENCE, senior vice president and chief technology officer, Napster LLC, New York

Best CAREER ADVICE

I was once told, 'If it feels really good to say, you probably shouldn't say it.' That has a profound impact on relationships with others – they don't believe you stand ready to attack.

LARRY QUINLAN, CIO, DELOITTE & TOUCHE USA LLP

BETH S. PERLMAN, CIO and senior vice president, Constellation Energy Group, Baltimore

MARK A. QUIGLEY, senior vice president and CIO, EMC Corp., Hopkinton, Mass.

LARRY QUINLAN, CIO, Deloitte & Touche USA LLP, Hermitage, Tenn.

LARS RABBE, senior vice president and CIO, Yahoo Inc., Sunnyvale, Calif.

THIYAGARAJAH RAJAH, CIO, CLSA Ltd., Hong Kong

TIMOTHY C. RAMSAY, associate vice president of IT, University of Miami, Coral Gables, Fla.

BRIAN RANGER, general manager of systems and technologies, PCL Constructors Inc., Edmonton, Alberta

DON R. RILEY, CIO, Mohawk Industries Inc., Dalton, Ga.

BRYAN M. SASTOKAS, director of information services, strategy and architecture, Universal Service Administrative Co., Washington

DAVID N. SAUL, senior vice president, Office of Architecture, State Street Corp., Quincy, Mass.

DONNA K. SEYMOUR, CIO, U.S. Maritime Administration, Washington (see story, page 54)

YEN-PING SHAN, former CIO, chairman, and senior vice president of engineering and development, Reynolds and Reynolds China, The Reynolds and Reynolds Co., Kettering, Ohio

Best CAREER ADVICE

Early to rise, work like heck, and advertise. A career is made by working extremely hard, not being afraid to give it all you've got, and by communicating the successes of the team. A passionate determination to serve others is what makes the difference between a good job and a great career.

GERALD W. SHIELDS, SENIOR VICE PRESIDENT AND CIO, U.S., AFLAC INC.

GERALD W. SHIELDS, senior vice president and CIO, U.S., Aflac Inc., Columbus, Ga.

MARK E. SHOWERS, CIO, Monsanto Co., St. Louis, Mo.

BARRY L. SHULER, senior vice president of IT strategy and chief technology officer, Marriott International Inc., Washington

DANNY A. SIEGEL, director of data warehousing and business intelligence, Pfizer Inc., New York

DEBRA SLEIGH, vice president and CIO of clinical applications, Sutter Health, Mather, Calif.

DONNA M. SLYSTER, senior vice president and CIO, CHEP, Orlando

GREGORY S. SMITH, vice president of IT and CIO, World Wildlife Fund, Washington

VIJAY SONTY, CIO, education technology services, School Board of Broward County, Sunrise, Fla.

JUDITH SPITZ, CIO, Verizon Business, Basking Ridge, N.J.

BARRY D. STRASNICK, CIO, CitiStreet LLC, North Quincy, Mass.

KENNETH D. THEIS, chief deputy director, Michigan Department of IT, Lansing, Mich.

MICHAEL M. THOMAS, vice president and general manager, Lockheed Martin Integrated Systems & Solutions, Fairfax, Va.

LYNN H. VOGEL, vice president and CIO, The University of Texas M.D. Anderson Cancer Center, Houston

PETER R. WALTON, vice president and CIO, Hess Corp., New York

ALINE M. WARD, CIO, Mississippi Power, Southern Co., Gulfport, Miss.

NIGEL J. WATSON, vice president of IS, transportation portfolio, United Parcel Service of America Inc., Louisville, Ky.

ROLAND J. WHITEHEAD, global director of IT, Bonhams 1793 Ltd., London

LYNN R. WITHERSPOON, vice president and CIO, Ochsner Health System, New Orleans

DENISE D. WOOD, corporate vice president and chief information security officer, FedEx Corp., Collierville, Tenn.

ANDREAS WUCHNER, head of global IT security, Novartis International AG, Basel, Switzerland

PREMIER 100 HONOR ROLL:
For a list of all 800 honorees, visit www.computerworld.com/07/p100.

How the Leaders Were Chosen

Each year, *Computerworld* evaluates nominated IT executives for inclusion as Premier 100 IT Leaders in a multistep survey process. For a detailed look at our methodology, visit *Computerworld.com*. Special thanks go to our 10 judges, themselves Premier 100 IT Leader alumni, who helped select this year's honorees.

JERRY BARTLETT, vice president, application development and quality assurance, TD Ameritrade Holding Corp., Columbia, Md. (2005 HONOREE)

REBECCA A. BLALOCK, senior vice president and CIO, Southern Company Services, Atlanta (2006 HONOREE)

NIDA S. DAVIS, chief architect, Federal Reserve Information Technology, Richmond, Va. (2006 HONOREE)

DALE N. FRANTZ, CIO, Auto Warehousing Co., Tacoma, Wash. (2005 HONOREE)

JOANNE M. KOSSUTH, CIO, Franklin W. Olin College of Engineering, Needham, Mass. (2005 HONOREE)

ENZO MICALI, senior vice president and CIO, 1-800-Flowers.com, Westbury, N.Y. (2006 HONOREE)

DIANAH L. NEFF, senior partner, Civitium LLC, Alpharetta, Ga. (formerly CIO, city of Philadelphia) (2006 HONOREE)

JAN G. RIDEOUT, vice president and CIO, Northrop Grumman Ship Systems, Pascagoula, Miss. (2005 HONOREE)

ROBERT A. ROSATI, senior vice president and CIO, Werner Co., Greenville, Pa. (2001 HONOREE)

BRIAN A. YOUNG, vice president for IT, Creighton University, Omaha (2005 HONOREE)

THE BUSINESS GETS TO DETERMINE WHAT WE DO. I GET TO DETERMINE HOW WE DO IT.

RANDY G. BURDICK
CIO, OFFICEMAX

ANDY GOODWIN

Syncing Up With Your CEO

Pleasing the boss requires CIOs to be catalysts, gatekeepers and diplomats.

BY GARY ANTHES

RANDY G. BURDICK, executive vice president and CIO at OfficeMax Inc., reports to the CEO, and he says pleasing the boss is simple in concept. "He is pleased by the business doing better," Burdick explains.

After that, things get a bit more complicated. "It's a matter of being well integrated with the entire executive team," Burdick says. So helping the Naperville, Ill.-based retailer "do better" requires him to embrace the disparate goals of marketing, finance, supply chain operations, store operations, the legal department and human resources.

Burdick and other Premier 100 IT Leaders can generally tick off precise lists of their CEOs' goals, from high-level guidance such as "Improve our competitive position" to detailed prescriptions such as "Increase margins in Latin America by 3.5%." They report a variety of strategies for meeting these goals, but most say success requires strict discipline tempered by a deft handling of human relations.

As a CIO, Burdick isn't unusual these days in occupying a special role among executives at his company. "The CEO came to me and said he wanted a five-year plan, and he asked me to pull that together," Burdick says. He was also tapped to head an enterprise project management office.

But Burdick is careful to point out that he isn't some kind of planning or project management czar with power over non-IT areas. His role is more one of a "catalyst" around the planning process, he says.

In addition to drawing guidance from overall corporate goals, Burdick is expected to pay attention to the goals of individual projects, not just IT

Advice on the House

- Try "tough love" with your colleagues – firmness tempered with diplomacy.
- Employ "dashboards" – automated or not – to track and give visibility to progress against goals.
- If your CEO gives you goals but not the authority to achieve them, look for another job.

projects. Most of the business projects are measured by their internal rate of return, a way of calculating a financial return via discounted cash flow. Other initiatives, including many pure IT projects, instead have "compliance" goals — like addressing some regulatory requirement such as the Sarbanes-Oxley Act.

Burdick acknowledges that disputes with other business unit managers can arise over priorities and goals. "First, we have a debate on it, privately," he explains. "If I feel really strongly about it, I'll tee it up at the executive steering committee."

If he doesn't feel strongly about it, he'll often accede to the wishes of the other manager. "The business gets to determine what we do. I get to determine how we do it," Burdick says.

GOAL-ORIENTED

Greg Smith, vice president of IT and CIO at the World Wildlife Fund in Washington, says he plays a similar role at the nonprofit organization. "A hidden role of the CIO, and one we should play more actively, is that of gatekeeper," he says. "I'm not going to rubber-stamp a project that has an IT implication that I don't think has merit."

Smith reports to the senior vice president of operations, and "it's pretty obvious what my supervisor expects," he says. One of those expectations is that Smith will vet all major World Wildlife Fund projects against five annual goals from the CEO. The closer a project proposal ties to those goals — especially revenue-generating goals — the more likely it is to be approved, Smith says.

One goal is to increase revenue overall, and another is to increase member support in 19 geographic regions where the World Wildlife Fund has special conservation programs.

Smith says the "governance structure" at World Wildlife Fund works well because it adheres to a for-profit model of accountability.

"[Our model] puts responsibilities and roles in the proper places [and] applies standards, procedures, methodologies and signatory sign-off," he says.

For example, Smith says, "I won't even consider buying or building a piece of software for a business unit until we have a signed-off requirements document."

Empowering the CIO to issue mandates can be a double-edged sword, says Tina Nunno, an analyst at Gartner Inc. "When mandates are not realistic or possible, CIOs must engage key stakeholders and help them come to the best decision for the enterprise," she says.

"This process is more time-consuming and may take the form of a governance process, informal meetings or a campaign to educate and get stakeholders on board," Nunno says. "Yet the rewards are often a higher rate of buy-in to the IT strategy, a higher rate of compliance and greater overall satisfaction with the CIO and IT organization."

For Carolynn Horrell-Chamoun, CIO at Telerx Marketing Inc. in Horsham, Pa., syncing up with the call-center company's CEO means paying attention to many things. There's a long-range plan to be considered and an annual plan with both strategic and tactical goals, some of which deal with financial measures and some with service quality.

The Telerx annual plan began as a draft with 28 objectives that were then distilled to eight. Each of those strategic objectives has an "owner" who is a member of the executive leadership team. For example, the CIO is tasked with reducing overhead expenses in seven areas, including recruiting, consulting and disaster avoidance. Below that are separate projects, each of which is identified with one or more of the eight objectives.

How to keep track of all that? One way, Horrell-Chamoun says, is with a manual tracking report that assigns red, yellow or green lights to each of the major objectives and to major projects.

"Once a month, we report on the status of off-target objectives, and we agree on what the key milestones are and when they will be delivered," she says.

Horrell-Chamoun says the CEO credits the executive leadership team with achieving its goals only if all major projects earn green lights. "Therefore, we have collective alignment, not individual wins," she says.

As vice president of applications development, Vava Dimond at Schneider National Inc. in Green Bay, Wis., is one level below CIO, but she enjoys considerable clout when it comes to deciding whether proposed projects line up with the CEO's goals.

Projects are evaluated along four dimensions, she says: 1) Is the business able to take on the project and succeed with it? 2) Does it meet budgetary constraints? 3) Does it meet return-on-investment criteria? and 4) Is it a good fit with the enterprise IT architecture?

Dimond says the key is to look for balance among the four criteria. "Sometimes you might have a project that looks very good in terms of ROI, but we simply won't be able to manage the change inside the business because they don't have the resources."

She says the second success factor is "interlock," by which managers meet periodically, compare their plans and look for critical dependencies. "For example, I might say, 'I see this box here that says you are going to do X, Y and Z. I think I have an IT connection there.' "

Sometimes there are conflicts in the goals and priorities among the company's business managers, Dimond concedes. "A lot of times, the business sponsors don't understand well enough yet what an enterprise architecture looks like and why it is important that certain standards be met or that we don't want to add yet another ecosystem to our environment because of the cost. Sometimes it's about educating them, sometimes it's about compromise," she says.

"There can be robust dialogues," says Dimond. "Every time we go through this process, we learn something and we continue to tweak it." ◆

Governing IT

THE STATE OF MICHIGAN'S CIO is a political appointee, so the heavy lifting in IT is done by Kenneth Theis, chief deputy director of the Department of Information Technology. One way to sync up with the CEO, Theis says, is to have a CEO who really appreciates IT. "We have a governor who understands IT – truly understands it as a strategic advantage," he says.

Theis, who heads a staff of 1,800 IT employees, works with the CIO, the governor and 19 agency heads to draft annual plans for the state. The governor's current strategic plan has six goals, such as to improve student achievement, and each goal has a number of specific objectives, such as to double the number of students who earn college degrees or other marketable credentials.

Gov. Jennifer Granholm oversees the annual planning and goal-setting process, but she tapped IT to coordinate and facilitate the process among all the agencies. According to Theis, "Most IT organizations have a hell of a time even getting into those [planning] meetings, but we actually facilitate it.

"That gives us tremendous insight into what the governor and agencies are trying to get done," he says. "Then we publish a corresponding IT plan that matches up with the governor's strategic plan."

Thomas Koulopoulos, president of Delphi Group, the research and consulting division of Perot Systems, observes, "The position of CIO is a litmus test for how good an organization's leadership is. In organizations with mature, decisive and empowered leaders, the CIO is often an individual with significant political and organizational capability.

"In organizations with immature leadership, the CIO is an organizational pawn and typically relegated to detailed technology issues," he explains. "If keeping the lights on is the CIO's mandate, he or she had better rethink their 401(k) plans, since they will likely need them sooner rather than later."

Says Theis, "What Michigan has done in the IT world is take a very centralized approach to IT, but it's all completely driven by the priorities, objectives and goals of the governor and her direct reports in the 19 agencies."

– GARY ANTHES

"WE HAVE A GOVERNOR WHO UNDERSTANDS IT – TRULY UNDERSTANDS IT AS A STRATEGIC ADVANTAGE.

KENNETH THEIS,
CHIEF DEPUTY DIRECTOR, DEPARTMENT OF INFORMATION TECHNOLOGY, STATE OF MICHIGAN

Being a Business Team Player

Walking in the shoes of business execs helps IT leaders better understand their needs.

BY THOMAS HOFFMAN

THE CLOSEST working relationship that Tony Caesar has as CIO at Head/Penn Racquet Sports is with the vice president of operations. It makes sense — with oversight of the company's customer service, logistics and other functions, the operations chief "runs the heart of the business," says Caesar, and the IT organization is central in supporting those activities.

But even though their responsibilities require the two executives to work closely together, that doesn't mean it's always been a marriage made in heaven. The relationship between the two men "had its challenges in the past," Caesar acknowledges.

"Sometimes we were each driving in different directions," he says.

There were a couple of reasons for these disparities, Caesar explains. In the past, there were times when the head of operations could be myopic "and only see his world," whereas a CIO has to consider all sides of the organization when making decisions, he says.

In recent years, Head/Penn's organizational structure has been flattened, and it has taken some time for the operations chief to get used to these changes and hit his stride, notes Caesar. But the head of operations has since acclimated, and Caesar's relationship with him has strengthened. "We now have a better understanding of each other, since we have more of a common vision instead of an operations eye and an IT eye," says Caesar.

For many Premier 100 IT Leaders, the key to building successful business relationships is the ability to demonstrate chameleonlike qualities. For instance, at Trinity Health, Senior Vice President and CIO Paul Browne makes a point of meeting at least annually with each of the 17 CEOs who run Trinity's organizations, to gain a better understanding of their unique market and geographical demands.

"In some markets, it's important that our hospitals develop joint ventures with other health care providers, so I need to work with them on what this means from a technology standpoint," Browne says of the Novi, Mich.-based Catholic health system.

I SELL CONCEPTS AND IDEAS AND TRY TO EXPLAIN HOW WE CAN HELP MAKE THE BUSINESS MORE SUCCESSFUL.

BETH PERLMAN,
CIO, CONSTELLATION ENERGY GROUP

Like Browne, Rod Burfield, CIO at the Washington (D.C.) Metropolitan Area Transit Authority, also works closely with his organization's IT steering committee. The agency's IT investment review board, which Burfield formed six months ago, is a close-knit group that includes the chief financial officer, the chief of staff and the heads of human resources, operations and construction.

"I just passed my 30th anniversary with the organization, and I really do know where the bodies are buried and how this place really works, and that has helped me enormously," says Burfield, who was named CIO in June. "That's an incalculable advantage."

Some CIOs are blessed with longstanding relationships with their business peers. Take Accenture Ltd.'s Frank Modruson. He became CIO four years ago, after having spent the previous 15 years in a variety of roles at the management consultancy.

By the time he became the IT chief, Modruson knew 60% to 70% of the senior managers at Accenture. His boss, Chief Operating Officer Steve Rohleder, joined the firm in 1981, so the two share "a common heritage and people that we've worked with over the years," says Modruson.

It can be quite different for newcomer CIOs, who can get off on the wrong foot with incumbent business leaders who might have altogether different expectations of their relationship. That happened to Beth Perlman after she joined Baltimore-based Constellation Energy Group as senior vice president and CIO in 2002 from Enron Corp.

Advice ON THE House

- Pick your battles. Not everything is worth fighting over.
- Drop in on business leaders without an appointment; find out what makes them tick and what their challenges are.

After she'd been on the job for about a year, Perlman informed the head of one of Constellation's business divisions that some changes would be needed to make operations more efficient in his department. This included transferring out an IT leader who had served in the Navy on the same submarine crew with some of the managers of his business unit prior to joining the company.

"I think some people thought I was going to be an order-taker when I came in, but I always positioned IT as a strategic relationship," says Perlman, who says that the business unit's leader ultimately realized that the transfer was the right move. Still, her relationship with him got worse before it became better, she says.

"I sell concepts and ideas and try to explain how we can help make the business more successful," says Perlman. Just as any IT leader would try to do. ◗

Change Agents

AS CIOs BECOME MORE immersed in business activities, they're often playing critical roles not only in strategic IT deployment but also in helping to design or change critical business processes.

With a worldwide base of 133,000 employees, Accenture Ltd. hires a lot of people. To help make the hiring process more efficient, the company undertook an effort last year to collapse some 40 recruiting systems used around the world into a single, global platform, says CIO Frank Modruson.

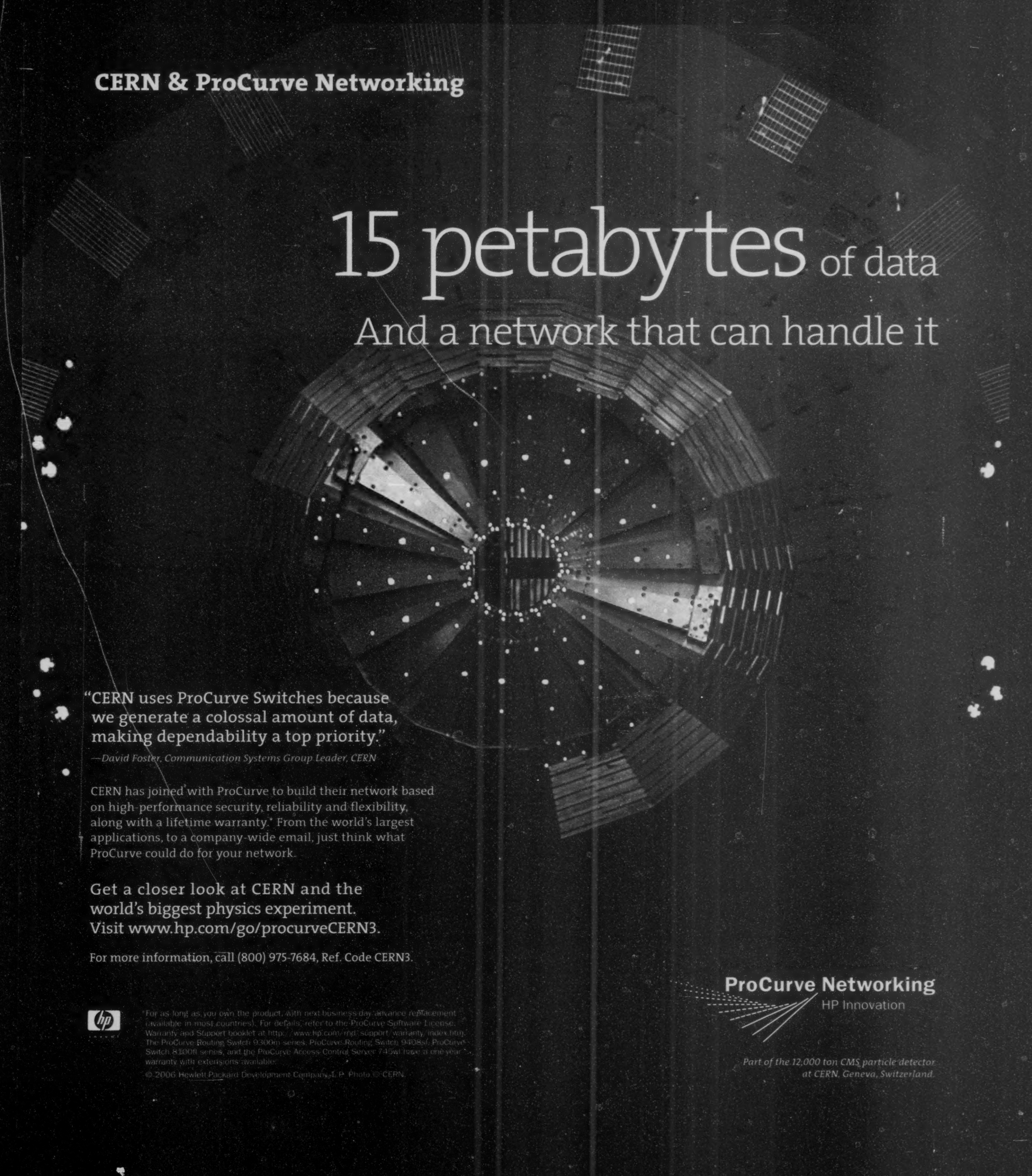
"We're looking at about 1 million résumés a year, so getting down to a single business process for recruiting is really powerful," says Modruson.

The business process redesign effort, which began in July 2005 and was recently completed, was truly a team effort between Accenture's IT and human resources organizations, says Modruson. His role involved helping to select a vendor and putting together the right project team.

Shortly after Beth Perlman became senior vice president and CIO at Constellation Energy Group in April 2002, she orchestrated some important business process changes to a new human resources and payroll system that was being installed. Prior to the deployment, some of the utility's employees were paid weekly while others were paid biweekly or monthly.

To make things more uniform, all employees were moved to a biweekly pay cycle, at Perlman's prompting. "It was difficult," she says. "We had some lower-paid assistants who were accustomed to being paid weekly." Constellation Energy helped transition some employees to the biweekly format by providing them with loans and bridge plans, Perlman says.

–THOMAS HOFFMAN



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Not Your Father's IT

Today's IT leaders are helping to design, evolve and innovate new business models.

BY JULIA KING

As CIO and senior vice president of engineering and development at Reynolds & Reynolds, Yen-Ping Shan's calendar listed a regular weekly meeting with the Dayton, Ohio-based company's CEO.

At Sonora Quest Laboratories LLC, CIO Bob Dowd has a list of assigned customers — mostly big, multilocation health clinics — that he visits each quarter.

On any given day, Darryl Lemecha, ChoicePoint Inc.'s CIO and senior vice president of shared services, is just as likely to be meeting with a venture capitalist to get information about a small but promising technology firm as he is to be walking a key client through ChoicePoint's business strategy.

Three different calendars tell strikingly similar stories about the changing role of IT executives. No longer are CIOs and other IT leaders simply supporting their companies' business strategies. Instead, many of this year's Premier 100 IT Leaders are helping to design, evolve and innovate business models as their companies increasingly look to IT to create revenue streams.

"Anytime you go to market to sell some new business, technology is always a topic, whether it comes up as speed of delivery, service quality or product innovation," Lemecha says. "I don't believe you can talk about business strategy independent of a technology strategy anymore. They are one and the same."

"IT is embedded in everything we do," says Monsanto Co. CIO Mark Showers. "The idea of [systems] integration and needing information across all components to effectively run the business is absolutely mainstream now." What's more, "IT is all about helping the company to grow, not just run the business," he adds.

STEPHEN WEBSTER

> **"IT'S NOT SO MUCH THAT IT IS TAKING THE LEAD WITH BUSINESS STRATEGY OR WITH CUSTOMERS, BUT IT IS GETTING INVOLVED MUCH EARLIER IN THE PROCESS.**
>
> **YEN-PING SHAN,** FORMER CIO AND SENIOR VICE PRESIDENT OF ENGINEERING AND DEVELOPMENT, REYNOLDS AND REYNOLDS

Advice ON THE House

- Manage information, not computer systems and software.
- Hire for business acumen, not just technical skills.
- Focus on business value, not project ROI.
- Get closer to your company's customers.

Monsanto's new pricing model, which enables the company to charge for various agricultural and biotech products based on their value to customers in different agronomic zones, is a prime example. The model was developed by combining and optimizing customer, product and market data previously contained in separate data silos. Now, for example, the St. Louis-based company can charge a premium to customers whose corn crops are susceptible to European corn-borer insect larvae, because Monsanto's seed contains a trait that kills off the crop-eating predator. Buyers in other areas of the country pay less for the product.

"Depending on where you are in the country, the insect pressure varies substantially, so you'd like to charge more in places where there is a high insect pressure, because those customers get more value from the product. It's a classic price-to-value scenario," Showers explains.

"It's a far more complex pricing model than has ever before been used in our business," he adds, "but we've been able to increase revenue through this very information-intensive model."

Indeed, managing information — as opposed to managing computer systems and software — is a recurring theme among this year's Premier 100 honorees.

"The evolution of IT is clearly moving away from the management of technology to the management of information," says John Hinkle, vice president and CIO at Albany, N.Y.-based Trans World Entertainment Corp., which operates more than 800 music stores nationwide. Among the company's latest IT-enabled revenue streams is its "mix and burn" service, which enables customers in stores to create customized CDs by compiling digital music tracks from various artists onto a single disc.

> **"I DON'T BELIEVE YOU CAN TALK ABOUT BUSINESS STRATEGY INDEPENDENT OF A TECHNOLOGY STRATEGY ANYMORE. THEY ARE ONE AND THE SAME.**
>
> **DARRYL LEMECHA,**
> CIO, CHOICEPOINT INC.

Managing information requires different abilities than the purely technical skills associated with IT, Hinkle says. "The IT organization has to marry well with the business organization, not just the business goals and objectives," he says. That requires matching the right personalities and IT staffers with sales, marketing and other business functions at the company.

To accomplish this, Trans World has developed a project management office that includes managers who have developed expertise and a special rapport with the specific business functions to which they are dedicated. As CIO, Hinkle oversees this PMO in addition to serving on the company's executive board, and he is deeply entrenched in all business decisions.

"I'm involved in merchandising, store planning and in every other core strategic meeting at the company," he says. "I'm expected to be very well versed in these things, and I'm also expected to answer more than the IT questions. I'm part of the strategy brainstorming."

THE CUSTOMER CONNECTION

As technology either enables or is built into more and more products and services, IT leaders say it is imperative for IT departments to get closer to customers of both.

"Time and again, when we go and visit customers, we have a big 'aha,' " says Shan, who was chairman of Reynolds & Reynolds China and left the company in October. In one case, Shan and his team learned that its customer base of car dealers had little or no interest in a feature they had been planning to incorporate into a software product. In another case, learning firsthand about a customer's need to implement software in a certain way saved Reynolds and Reynolds 12 months of development time.

"It's not so much that IT is taking the lead with business strategy or with customers, but it is getting involved much earlier in the process," Shan explains. "By engaging early enough and showing value, IT is actually able to influence the business process and the business model. You can see the technical insights and business insights married together upfront."

At J.B. Hunt Transport Services Inc., Vice President of IT Tracy Black says her team is at the table from the beginning, during business strategy and goal-setting sessions, so it can help define the business strategy early on. IT is currently working with the company's trucks business unit to help define how it can change its processes to win the 20% of bids it is now losing to competitors, she says.

"It's not something IT would have even done three years ago," Black says. "Instead, the business unit would figure out that here's the 20% of business we want to go after, and it would think up a solution and then just tell IT to go and execute the idea."

Today, in contrast, "there's a big focus on project management, and we've really pushed collaboration [with the business units]," Black says.

ChoicePoint's Lemecha says CIOs are in a unique position to drive innovation because they have responsibility for all operational systems and understand all of a company's business processes as well. "We also understand the technological capabilities of the company and what those capabilities could be. Couple that with business strategy, and I think CIOs are in a great position to drive innovation throughout the organization," he says.

But IT's evolution from business enabler to business model innovator requires IT executives to shift their focus away from traditional return-on-investment measures, says Steve Olive, vice president of information solutions and CIO at Raytheon Co. Integrated Defense Systems in Billerica, Mass.

"It used to be that dollars and cents were a reasonable payback [and] that if there was a reasonable payback, it was a good project," Olive says. "Now, it's all about attacking the value proposition for the business." This shift has in turn changed how Raytheon recruits employees to its recently renamed Information Solutions organization. "We want people to think of IT as providing solutions, not technology," he says.

"The IT professional I look for now is much more savvy in business than technology," Olive says. Looking ahead, "IT is going to continue to evolve, getting further away from tools and more into data. We'll be inserting ourselves even more into the business and have a seat at the board table, not just the conference table." ▸

No More Smoke And Mirrors

INFORMATION TECHNOLOGY isn't the only thing that's changing. Customers and internal users of computers, are also evolving, says Bob Logan, vice president of enterprise infrastructure services at Science Applications International Corp. This is prompting IT to service users in new ways.

"Before, our user base was quite distant. IT really was smoke and mirrors to them," he says. Today, in contrast, "users are IT savvy. There's a higher demand for targeted and quality services. There's a pull for services, rather than IT pushing services out for users to accept. There's a tremendous demand model," he notes.

To meet this demand, Logan and his team have developed a catalog of IT services using the Information Technology Infrastructure Library, known as ITIL. "It's a way of aligning our IT services to what the organization really needs," he says.

So far, the catalog includes 43 services that are categorized into six areas. The area of communications, for example, includes telephones, BlackBerry devices and pagers. The hosting services area includes all back-office technology, such as Unix and Linux servers and applications.

"What's exciting about this framework is that it gets the whole IT organization thinking about how what they are doing is affecting a service at a customer's laptop. Using this kind of common language provides a natural alignment," Logan says.

Organizing and categorizing IT services into a structured framework that aligns with users' needs also results in more focused, business-oriented IT innovation, Logan says.

"Now we look at innovation not for the sake of IT innovation, but more along the lines of innovation that's focused on a clear business objective," he says. "IT no longer is coming up with solutions looking for problems. We're now innovating in the glide path because you can pull a string from the business need to the IT service."

– JULIA KING

FRANK HAYES ▪ FRANKLY SPEAKING

IT Unleashed

LEADERSHIP. Communication. Strategy. Diplomacy. Money. Technology. Industry. These are the things IT leaders must master. If you want to make it to the top of your profession, these disciplines are no longer fancy bells and whistles you might add on to your basic IT management functionality. These days, they're the requirements for the job.

Is that too much to ask? Maybe it feels that way.

After all, it wasn't so long ago that the tabulations department was only responsible for tons of data on punched cards. Just 50 years ago, a tabs manager's responsibilities were almost entirely operational: wrangling truckloads of cards, wiring up sorting and tabulating machines, and making sure printed reports — big stacks of green-bar paper — were delivered on time.

Eventually, the old sorters and tabulators were replaced by computers and software. Then came time sharing, departmental minicomputers, PCs, LANs, client/server computing, e-mail, the Internet, electronic data interchange, real-time supply chain management, data warehouses, online retailing and RFID tags.

With each new technology, as tabs morphed to DP, then MIS, IS and IT, the distance between information and the business got smaller. We moved closer to the business processes we supported; users moved closer to our data, hardware and software.

And beyond the simple logistics of primitive data processing, we took on automation, process re-engineering and business transformation. We focused on communications, not just networking. Business change, not just programming. Information, not just data.

Now here we are at the future, where technology only makes it to the No. 6 spot on the list of areas of must have expertise for IT leaders. Ahead of tech are all the skills necessary to wrangle executives, wire up deals and make sure business advantage is delivered on time.

Too much to ask? Perhaps — but not because we can't figure all this out. We already have. That list of seven crucial disciplines didn't come from a gaggle of geniuses at some think tank. It came from the CIOs among this year's *Computerworld* Premier 100. They're neck-deep in the real challenges of IT leadership in business. They're our people. They get it. We can, too.

No, if it feels like it's too much, maybe that's because although we've arrived at the future, large parts of the world around us are mired in the past.

We still rely on colleges and universities that crank out IT staffers who are mere coders and mechanics, who too often don't understand business, can't be bothered to learn and resent any suggestion that it's part of their job.

We still turn to hardware and software vendors who too often pitch speeds and feeds instead of business flexibility, who remain more interested in locking us into their proprietary products than in partnering with us to maximize our advantage and their sales.

And we still depend on the cooperation of our own business-side executives and managers, who too often are saddled with obsolete ideas about what IT can do and whether they can trust us to help reshape the business.

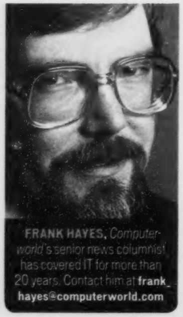
These people don't make it easy. But we can't let that stop us.

Those seven disciplines aren't just valuable to our personal career success. They're crucial to the success of the organizations we work for and all the people who depend on them. They mean the difference between competitiveness and decline, creativity and stagnation, progress and collapse.

That's the difference IT can make when it's unleashed. It's the difference we can make when we step up as IT leaders.

Leadership. Communication. Strategy. Diplomacy. Money. Technology. Industry. Master them. They represent what IT needs today and what business depends on for its future.

And if you think that's asking a lot — hey, just wait till you see what they want from you *next* year. ◆



FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**

Executive Decisions

These IT staffers spend after-work time on old-fashioned role-playing games. "The type where you use paper, pencil and a bunch of different-sided dice," explains a pilot fish in the group. "One day, a manager from another department burst in and demanded to know when we would have a project done. We didn't know what he was talking about, but he refused to go away until one of us rolled a 12-sided die for the month and a 30-sider for the day and told him it would be done on June 12. I then asked if he wanted to roll for the year. He stormed off in a huff. An hour later, our VP came down to say he was doing next year's schedule and wanted to borrow some dice."

SHARK TANK

NOT SO FAST!

IT pilot fish sees his boss using the fax machine – not such a common occurrence. Then, a few minutes later, he's back, faxing again. Fortunately, the boss stops by fish's desk to share. Turns out he had a small and easily accomplished piece of a project for corporate. "Having completed his task, he sent off the signed acknowledgement form and went about his business," says fish. "He then received an e-mail from the project manager requesting that he resubmit the status document – and this time, future-date it, please, so that the other people on the project don't appear to be slacking."

THAT WOULD HELP

High-powered consultant goes to work at this organization on some special deep-thinking projects. "On her first day, we set her up with a new laptop, docking station and large monitor," reports IT director pilot fish. "On her second day, she came into my office saying she was having connection problems. Would I come take look? I went to her office, and all that was there was the docking station and monitor. I asked, 'Where's your laptop?' She said, 'At home. Oh, you mean I have to bring it back in to work in here?' Yeah, I'm sure we'll get our money's worth out of her."

DIAL 'I' FOR ID

Exec complains to pilot fish that people at work are ducking his phone calls. "I figured he must be calling one of the few people who have the new phones with Caller ID," says fish. "I told him to dial 9 for an outside line, then dial the number and see if they answered. Our Caller ID doesn't work for calls from an outside line." Two days later, fish gets a memo: It's now against company policy to use an outside line to make an intraoffice call. Sighs fish, "It never dawned on me until then that the only people with Caller ID displays on their phones are the top brass!"

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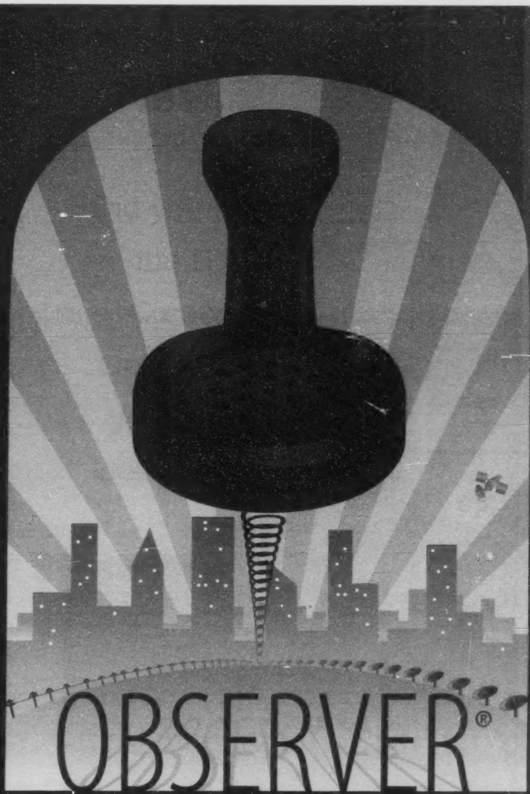

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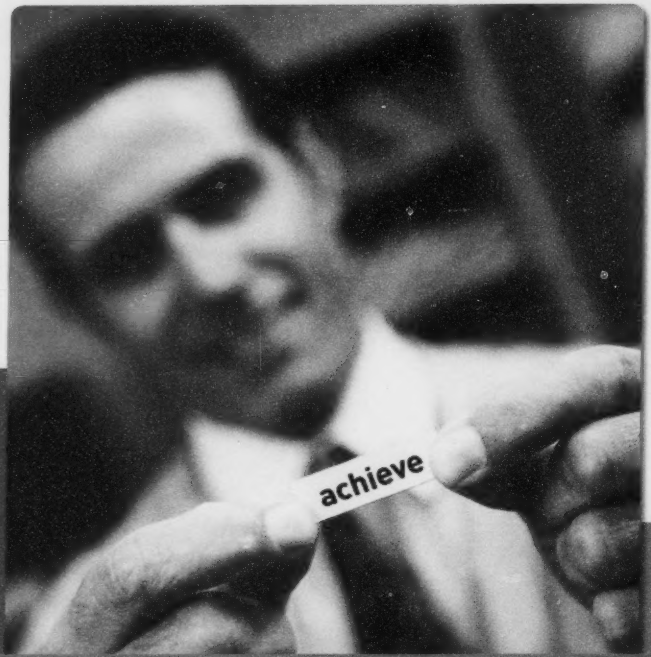

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Programmer Analyst (Multiple positions). Participate in all phases of SDLC to des & dev engg & business applns. Req's BS, MS or equiv in Engg,CS,math or related w/2-5 yrs exp in skills such as Unix, Linux, C, Java, VB Script, Voice XML, WAP/WML, MSQL Server,PostgreSQL, MySQL, Oracle & Computer Telephony Technologies. Mail resumes to Nationwide Electrical Testing, Inc. 335 Leatherman Ct, Alpharetta, GA 30005. EOE.

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Sr Sys Analysts (SSA1106): analyze, design, dev sw appls, data processing sys in Java, J2EE, Oracle, DB2, COBOL, UNIX; perform testing in Win Runner, Load Runner; gather buss reqs; define project scope, specs; provide guidance to team; interact with clients. Req: MS or foreign equiv in CS/Buss Admin/Math/ Engg /related & 6 mths exp. FT Travel Comp salary. Resume: HR, Computech Systems, Inc., 3700 Koppers St, Ste 136, Baltimore, MD 21227

Yoder Brothers, Inc., located in Barberton, OH, seeks a Programmer Analyst. The position requires a Bachelors degree in Computer Science and three years of experience. Mail your resumes to Renee Bates, Corp. HR Coordinator at 115 Third St. SE, Barberton, OH 44203 or fax your resumes to 330-848-2321, Attn.: Renee Bates

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